ASBPE MAGAZINE OF THE YEAR 2004

■ Sun stops ignoring network-attached storage technology and introduces its first NAS device. PAGE 6
■ Boeing will give its suppliers a set of RFID standards but won't require them to start using the technology. PAGE 7

COMPUTERWORLD

J.P. Morgan Scraps $5B IT Deal With IBM

Bank confirms plans to cancel outsourcing agreement, bring IT operations back in-house

BY STACY COWLEY

IBM lost one of its highest-profile IT outsourcing clients last week, as J.P. Morgan Chase & Co. confirmed that it's canceling the remainder of a seven-year, $5 billion contract that the two companies signed in late 2002.

Sources told *Computerworld* last spring that New York-based J.P. Morgan planned to bring most of the IT work it had outsourced to IBM back in-house after completing its $58 billion acquisition of Bank One Corp. in July [QuickLink 47508]. At the time, a spokesman for J.P. Morgan said the bank couldn't comment "on future negotiations."

Last week, J.P. Morgan said the addition of Bank One created a larger company with the capacity to manage the technology infrastructure on its own. The merger also brought J.P. Morgan two prominent advocates of running IT internally: Bank One CEO James Dimon and CIO Austin

Adams. Dimon is due to take over as CEO of J.P. Morgan in 2006, and Adams now heads IT for the merged company.

"We believe managing our own technology infrastructure is best for the long-term growth and success of our company," Adams said in a statement. He added that re-integrating IT operations into the bank "will give us competitive advantages, accelerate innovation and enable us to become more streamlined and efficient."

J.P. Morgan and IBM will wind down their contract this year, and the 4,000 IT employees and contractors who were shifted to IBM after the deal was signed will be transferred back to the bank in January.

The IT infrastructure functions currently being handled by IBM include management of the bank's data centers, help desks, distributed computing systems, and data and voice networks.

J.P. Morgan, page 16

CRM Goes Vertical

SPECIAL REPORT — Vendors are learning something users have always known: CRM in financial services is very different from CRM in health care or manufacturing. We profile seven industries and their special CRM needs.
STORIES BEGIN ON PAGE 33.

Online Exclusive
Our new Data Points collection has CRM factoids to download for your PowerPoint presentations:
QuickLink a4960

STEPHEN WEBSTER

Server Consolidation Can Cut Costs, but IT Faces Challenges

Streamlined systems boost utilization rates

BY MATT HAMBLEN
PHILADELPHIA

Server consolidation projects are reducing systems management complexity and costs in many data centers, IT managers said at a conference here last week. But some noted that consolidations may not be easy because of problems such as getting end users to cooperate and dealing with displaced IT workers.

For example, Jason Glazier,

chief technology and e-commerce officer at Lincoln Financial Group in Philadelphia, said the financial services company reduced the number of servers it has from about 300 to 100 over the past year after finding that end users were underutilizing some of the systems.
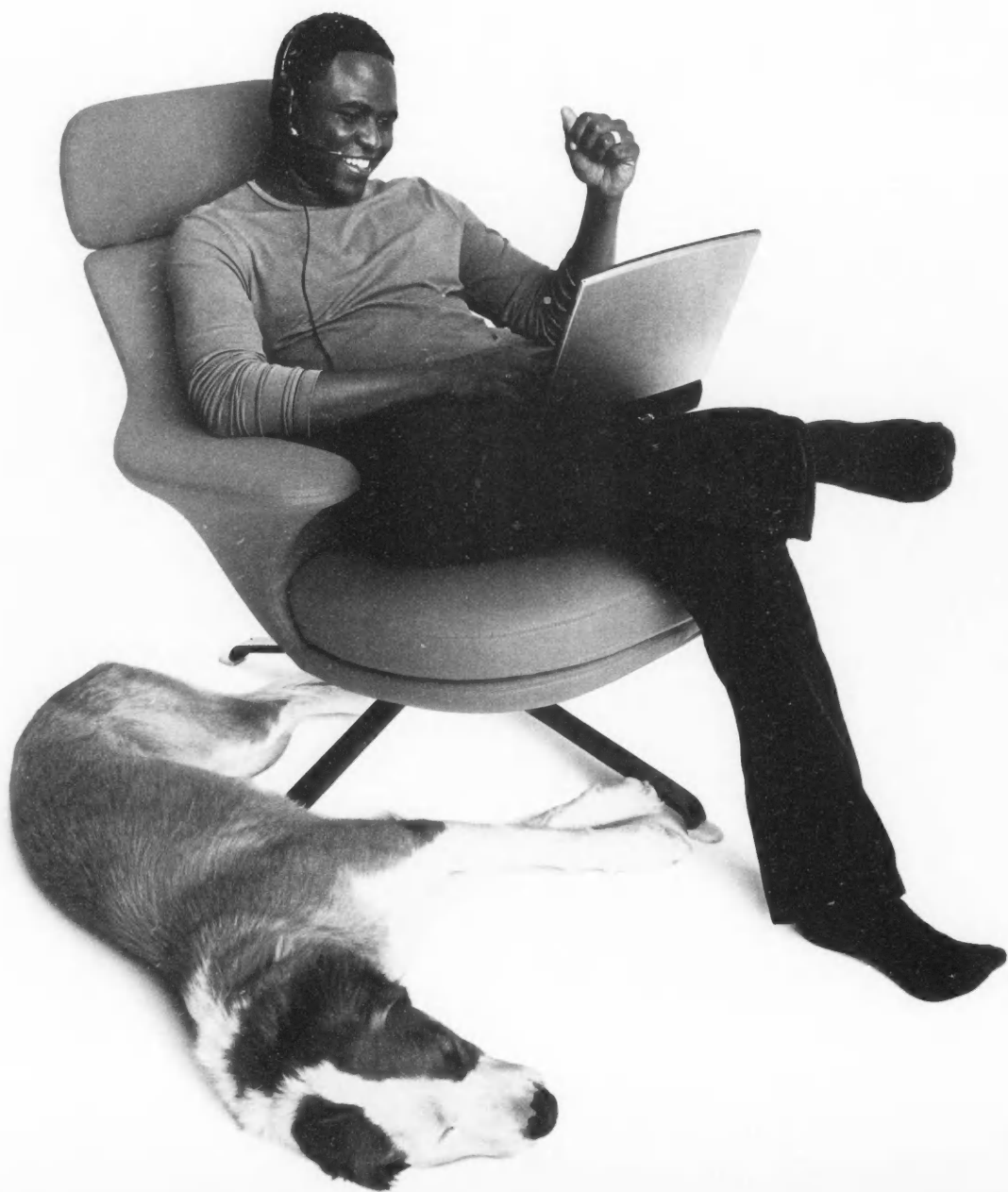
In addition to reducing its hardware costs, Lincoln has reaped significant savings on software licenses by lowering the number of operating system images installed on its servers from 600

to 200, Glazier said. He was one of the speakers at Enterprise Management World 2004, a new conference sponsored by *Computerworld* and Distributed Management Task Force Inc.

Servers, page 49

Ohio CIO Greg Jackson says the state is consolidating e-mail servers.

NEWSPAPER

MESSAGELABS ANNOUNCES THE BEGINNING
OF THE END OF EMAILS YOU DIDN'T ASK FOR,
FOR THINGS YOU DON'T WANT,
FROM PEOPLE YOU DON'T KNOW.

Defend against spam. At Internet level. Where MessageLabs operates a complete email security and management system. MessageLabs' patented technology combined with multiple techniques provides industry-leading filtering accuracy designed to identify the email you want and filter out the email you don't. And artificial intelligence learns from every message it intercepts, maximizing your protection from past, present and future spam techniques.

You can choose from multiple options for handling spam emails including an off-site quarantine service. Global businesses looking for a managed email security service turn to MessageLabs for a higher level of protection. It's where The Bank of New York, Computer Sciences Corporation, Air Products and Chemicals and the Federal Reserve Bank of New York turn for spam control.

To only get emails you ask for, for things you want, from a company you know.

MessageLabs
Turning
email security
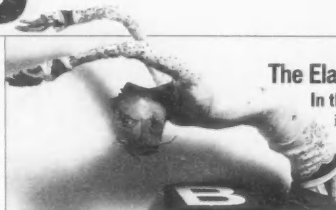inside out

Call (866) 460 0000 or visit www.messagelabs.com/here

CONTENTS

Taking Stock of E-paper
In the Technology section: Analysts have long predicted that e-paper would set the stage for the paperless office. Developing a paper substitute hasn't been easy, but it's catching on in applications like e-books. **Page 23**

The Elastic IT Staff
In the Management section: What do just-in-time inventory and portfolio management have to do with IT staffing? Plenty, according to CIOs who are applying those concepts to maximize staff flexibility while minimizing trauma. **Page 29**

NEWS

ONLINE

What's a QuickLink?
On some pages in this issue, you'll see a QuickLink code pointing to additional, related content on our Web site. Just enter that code into our QuickLink box, which you'll see at the top of each page on our site.

OPINIONS

DEPARTMENTS/RESOURCES

KNOWLEDGE CENTER CRM

CRM Goes Vertical

Managing sales and customer service in the manufacturing sector is dramatically different from CRM for financial services or health care. So in this special report, we profile seven industries and their different CRM needs.

SPECIAL REPORT PACKAGE BEGINS ON PAGE 33.

WWW.COMPUTERWORLD.COM

AT DEADLINE

Microsoft Could Sue Open Office Users

Microsoft Corp. said it's looking for ways to work cooperatively with the developers of Open Office, a set of open-source desktop applications that competes with Office. But it's also reserving the right to sue Open Office users or distributors, according to a legal agreement between Microsoft and Sun Microsystems Inc. that was signed in April and made public last week. Users of StarOffice, Sun's commercial version of Open Office, are protected from any legal liabilities.

Nortel Lowers Its Revenue Forecast

Nortel Networks Ltd. said it expects third-quarter revenue to come in below the $2.6 billion that the company reported on a preliminary basis for the second quarter. The Brampton, Ontario-based vendor also projected that its year-over-year revenue growth for 2004 will be in the mid-single digits. Nortel said it will likely lose market share as a result.

US Airways Filing Will Hurt EDS in Q3

Electronic Data Systems Corp. said its third-quarter earnings will be negatively affected by US Airways Group Inc.'s Sept. 12 bankruptcy filing. EDS has a long-term contract to provide IT services to US Airways, and the Plano, Texas-based vendor said in a filing to the U.S. Securities and Exchange Commission that it expects to set aside reserves for up to $27 million that it's owed by the airline.

Short Takes

IBM has upgraded some Think-Centre PCs with chips from NATIONAL SEMICONDUCTOR CORP. that store passwords, digital certificates and encryption keys. . . . STRATUS TECHNOLOGIES INC. in Maynard, Mass., today will introduce an entry-level fault-tolerant server that runs Windows.

Sun Changes Course, Releases First NAS Box

Drops its resistance to technology as part of effort to fill gaps in storage line

BY LUCAS MEARIAN

SUN MICROSYSTEMS Inc. tomorrow plans to announce several storage products, including its first network-attached storage (NAS) box and a midrange disk array that uses virtualization technology to pool storage capacity from its products and rival offerings.

Sun — which Gartner Inc. rates as a "promising" vendor in the storage hardware market — is trying to fill gaps in its product line and catch up to storage leaders such as EMC Corp. and IBM.

The foray into the NAS market is a big departure for Sun, which previously dismissed the technology but found itself losing sales to vendors such as Network Appliance Inc., said Michael Peterson, an analyst at Strategic Research Corp. in Santa Barbara, Calif. "That's like a religious epiphany" for Sun, he said. "They fought against NAS for a long time."

Mark Canepa, executive vice president of network storage at Sun, disclosed some details about the products in an interview last week, but pricing wasn't available.

A Growing Market

The entry-level StorEdge 5210 NAS device, which scales to 5TB of capacity, allows Sun to dip its toes into a growing market. NAS sales grew 15.2% from the second quarter of 2003 to the same quarter this year, according to IDC. The market is led by NetApp, with a 37.2% revenue share, followed by EMC, with 35.2%, IDC reported earlier this month.

MORE ONLINE

Sun is also expected to announce an all-in-one storage device:

QuickLink 49469
www.computerworld.com

Chuck Sears, manager of research computing at Oregon State University's College of Oceanic and Atmospheric Sciences, was among the first to beta-test a StorEdge 5210 NAS, with a 1.5TB capacity. Sears said he likes how well it integrates with his other Sun hardware and management software.

"We took that thing out of the box, and without going through documentation . . . we just rolled up our sleeves and were up and running in 15 minutes," he said. "It fit the existing management framework we've had for years."

Sears added that he likes the built-in support for the Network File System and Common Internet File System, which allows him to see all of his high-end Unix and low-end Windows servers under one view.

Sun will also announce its latest midrange storage array, the StorEdge 6920, which comes with high-end features such as the ability to plug in third-party arrays and create a pool of storage that can be carved into 1,024 separate volumes, each capable of serving a host system. The box comes with up to 60TB of storage capacity, plus the ability to partition the array into 14 domains.

James Dobson, a systems architect at Dartmouth College in Hanover, N.H., has been beta-testing the array for the past six months. Dobson said he likes the flexibility of the system but wants Sun to certify Linux and other server operating systems to run on it.

"It's important for us to have a mix of operating systems work on it," Dobson said. "We want to be able to pool resources and connect everything in the data center to one source. Otherwise, you start creating islands of storage."

It's easy to create new volumes on the StorEdge 6920 or change the size of existing ones on the fly, through either a Web or command-line interface, he noted.

Dobson added that the ability to attach third-party arrays — and manage it all through a single interface — means he can take advantage of less-expensive ATA disk drives. ● 49468

Be Cautious on Investments In RFID, UPS Exec Advises

BY CAROL SLIWA

United Parcel Service Inc. is not only piloting radio frequency identification technology for internal use, but it also plans to provide consulting and services to help its customers comply with RFID mandates issued by Wal-Mart Stores Inc., other retailers and the U.S. Department of Defense. In an interview last week, **David Barnes**, a vice president of information services at UPS, spoke about some of the lessons the Atlanta-based company has learned about RFID. Excerpts follow:

Q&A

What sort of RFID services is UPS offering to its customers? Customers are coming to us on many fronts, back to that simple "slap and stick": "Can you help us meet that deadline?" and "We just need to get this done." And there are customers in active discussions with us about "Can you just take it over and do it for us?" versus "Can you come in and consult and help us do it better?"

What do you tell them about what works and what doesn't work? If you go into some of the early-edition readers, a lot of these did not have the ability to be updated by software. One of the early lessons learned coming out of this is to be cautious of what you're investing in. Make sure it's adaptable to rapidly changing standards. If you're buying readers and hardware and such, make sure things can be backward-compatible and upgradable.

How many of your customers are dealing with the middleware aspects of RFID at this early stage? From what we have heard in discussions, a lot of customers have chosen middleware and bought that. I think what they're seeing is that it's rapidly changing. So there's an issue of "don't get too close to it because it's going to change rapidly over time." But middleware is a necessity in this. It's one thing to buy the tag. It's another to encode the tag. It's another to read the tag. But once you've read that tag, you have to have middleware to bring that back to some application, because even with the DOD or with Wal-Mart, you have to provide the information backwards. ● 49471

Boeing Readies RFID Standards For Release to Suppliers in 2005

But aircraft maker won't mandate usage

BY JAIKUMAR VIJAYAN
CHICAGO

The Boeing Co. is on track to issue a set of radio frequency identification specifications to its suppliers sometime during the first half of next year, an executive from the aircraft maker said at the Frontline Solutions Conference and Exposition here last week.

The specifications will spell out Boeing's technical standards relating to issues such as the frequency, memory capacity and size of RFID tags and labels. Suppliers that ship parts to Boeing will eventually need to label their components with RFID tags that meet the specifications.

However, there will be no mandate from Boeing requiring suppliers to implement RFID tagging right away, said Daryl Remily, deputy program manager of the company's Auto-ID program.

Boeing also hasn't decided which of the thousands of parts that go into making an aircraft it wants to be tagged first, Remily said. That decision will be based on a study of several factors, including the cost of a part, its importance to aircraft operations and how easy it is to repair, he added.

Common Standards

Boeing's plan to RFID-enable its supply chain is similar to moves being made by companies such as Wal-Mart Stores Inc. and Airbus SAS, Boeing's European aircraft rival. In fact, Boeing and Airbus are working together to promote common standards for the use of RFID within the aviation industry [QuickLink 47350].

One issue that still needs to be addressed is whether suppliers will get any tangible paybacks from their RFID investments. "A lot of people are rushing into RFID without a clear idea of what their business case is," said Jeff Woods, an analyst at Gartner Inc.

But companies in the aerospace and defense industries could benefit from the more efficient marking and tracking of parts that RFID technology makes possible, Woods added. "The trick is to make sure that everyone benefits from it, including the suppliers," he said.

Boeing expects the use of RFID tags to lower its receiving costs, improve its ability to track parts and reduce the risk that unapproved components will find their way into planes, according to Remily. Potential benefits for suppliers include lower inventory costs as well as improved configuration control and more detailed repair histories, he said.

Boeing and Airbus plan to use The Air Transport Association of America Inc.'s Spec 2000 e-business standard for specifying how individual RFID labels need to be constructed using parts numbers, serial numbers and manufacturers' codes, Remily said.

Boeing is also carrying out a series of tests to verify the usability of RFID tags on commercial airplanes. Earlier this year, it completed a 90-day evaluation of 13.56-MHz passive RFID labels that were affixed to different parts of an MD-10 freight airliner owned by FedEx Corp.

The 10Kbit labels were test-ed for their potential to create electromagnetic interference, as well as for adhesiveness, readability of data and the ability to write data into them. According to Remily, the labels showed no detrimental environmental effects and didn't cause any electromagnetic problems during the test.

In the next few weeks, simi-lar tests will be conducted on RFID tags that will be stuck to the engine cowling on six Boeing 757 aircraft belonging to Delta Air Lines Inc., Remily said. ◐ 49473

BOEING HOPES **RFID** tags will improve its ability to track aircraft parts.

MORE THIS ISSUE

RFID technology isn't ready for prime-time IT, writes columnist Frank Hayes. See page 50.

IBM Broadens Suite of RFID Services

Reaches out to industrial and midmarket firms

BY JUAN CARLOS PEREZ

IBM last week expanded the consulting and implementation services that it offers to companies seeking help on installations of radio frequency identification technology.

Over the past several months, IBM has developed separate sets of RFID services for industrial and midmarket companies. Services for industrial users include initial consulting, business case development, technical proof-of-concept work, pilot rollouts and full system deployments. Services for midsize businesses include project development workshops, site surveys and testing, IBM said.

Eric Gabrielson, vice president for RFID at IBM Global Services, said companies are exploring RFID for reasons beyond complying with mandates from their trading partners. He noted that corporate executives also hope to get tangible benefits from the technology, such as improved business processes and enhanced capabilities for collaborating with customers.

That's the case at H.J. Heinz Co. Doug Ostrosky, Heinz's RFID program manager, said the Pittsburgh-based company wants to see how the business case for RFID will look 10 years out, including "where we can see some benefits [and] where we can see some cost offsets."

In addition, Heinz wants to extend its use of RFID "from 'slap and ship,' which is the 2005 retailer mandate, all the way out through tagging items in a production environment," Ostrosky said.

For now, Heinz is focused on getting a pilot project up and running. In June, it hired IBM to help with the project, which is slated to end by November with the installation of RFID equipment at one facility. Ostrosky said IBM is helping with product testing, drafting a business case and setup of the pilot facility.

Vendor Candor

So far, Ostrosky has been happy with IBM's services, particularly with the vendor's candor about the still-immature technology. "If they don't know an answer, they don't make it up," he said. "They find the right source, ask the right questions and come back with the most honest answer."

And some questions simply don't have a definitive answer in the RFID world yet, including the technology's acknowledged difficulties with certain materials and packaging. One such case is Heinz's flagship ketchup product and its con-tainers, Ostrosky said. "We have a liquid product in a sometimes glass or plastic container with metal or plastic lids, and that for some reason doesn't lend itself to 100% [RFID] readability all the time," he said. "For our product, the technology still isn't where we'd like it to be."

Meanwhile, midmarket companies such as Kayser-Roth Corp. in Greensboro, N.C., don't want to be left behind. Kayser-Roth isn't one of Wal-Mart Stores Inc.'s 100 largest suppliers, so it wasn't required by the retailer to start using RFID tags on some goods by January. Nevertheless, the apparel maker volunteered to meet the deadline.

Gary Stegall, senior project manager at Kayser-Roth, said the company is working with IBM on a pilot project to RFID-enable a distribution center in Burlington, N.C. "Our goal is to use IBM to help us get this first pilot off the ground and then enable the rest ourselves as we need to," he said. ◐ 49472

> **❝ For our product, the technology still isn't where we'd like it to be.**
>
> **DOUG OSTROSKY**, RFID PROGRAM MANAGER, H.J. HEINZ CO.

Perez writes for the IDG News Service.

NEWS

BRIEFS

Microsoft Tries to Patch JPEG Flaw

Microsoft Corp. issued software patches designed to fix a JPEG-related security flaw that affects various versions of Windows, Office and other products. The company said attackers could exploit the buffer overrun vulnerability in its JPEG processing code to take full control of unprotected systems. Microsoft gave the flaw a "critical" severity rating.

Sendo, Microsoft Settle Legal Claims

Microsoft and mobile phone maker Sendo International Ltd. said they have agreed to settle a 2-year-old legal dispute over smart-phone technology. Both denied any legal liability in the case, but Microsoft agreed to surrender its 4% stake in Birmingham, England-based Sendo. The two companies said the settlement also includes "a monetary component," but they wouldn't disclose the details.

Sun Reduces Q4 Earnings by $12M

Sun Microsystems Inc. trimmed the preliminary financial results it had reported for its fourth quarter, which ended June 30. In a filing with the U.S. Securities and Exchange Commission, Sun said it lowered fourth-quarter net income by $12 million after a final accounting of asset-retirement obligations and the legal settlement it signed with Microsoft last spring. Sun's profit for the quarter is now $783 million.

Short Takes

CISCO SYSTEMS INC. said it will pay $55 million to buy Dynamicsoft Inc., a Parsippany, N.J.-based vendor of voice-over-IP software for telecommunications carriers. . . . SAP AG has opened a customer support center in Dalian, China, that will provide services to users primarily in the Asia-Pacific region.

[ON THE MARK]

Hot Spot Problem Gets Hotter . . .

. . . with a compact, 6 oz. 802.11b Wi-Fi device that can turn a simple dial-up line into an online access point for an 11Mbit/sec. Ethernet wireless network. The WiFlyer from Houston-based start-up Always On Wireless Inc. will up the ante in ease of Internet access when it ships in mid-October. The $149 device creates an instant wireless LAN that connects up to 14 PC or Macintosh users. It can use its two Ethernet ports to connect to a broadband network or its RJ-11 connection to link to an ISP for Internet access. This creates potential security issues for IT, though. If the WiFlyer is connected to a corporate LAN inside the firewall by some enterprising data thief and then linked to the outside world via an unsecured dial-up line (and which of your dial-up connections are secure?), it could be a way to bypass your network security systems. On the other hand, as a tool for teams of corporate road warriors, the WiFlyer can be a real asset by making it possible to set up instant workgroups in hotel and meeting rooms and other locations with or without broadband access. Just another technology miracle you need to worry about.

Real-time RFID data capture . . .

. . . hits 10,000 events per second with the ObjectStore RFID Accelerator, set to ship in Q4, from ObjectStore, a division of Progress Software Corp. in Bedford, Mass. Although you might be facing more than data-capture hurdles in your RFID exploits (see "RFID Adventure," page 50), this tool is at least based on ObjectStore technology that's currently used for gathering data about high-speed events in financial markets, such as stock price updates. The stored data can be queried from its object database via standard XML expressions. Pricing starts at $25k, and the software runs on Linux, Solaris or Windows servers.

WiFlyer turns dial-up into hot spots.

Lotus alternative offers standard . . .

REINHARD: Develop in Java, not Notes.

. . . Java development tools that mimic the Notes/Domino programming environment but retain the messaging and calendaring tools built into Notes, so end users need not be moved off of IBM's popular groupware technology. So promises Peer Reinhard, CEO of Quality On-Line Inc. in San Diego. He brags that it's a snap to port existing Notes apps to work with his 100% Java programming tools. And you know that Java-savvy developers outnumber those with Notes smarts, which could be a factor in your decision on whether to stay the Notes course. Quality On-Line's application control system, called Organization Manager, and its Integrated Process Control workflow tool are available this week. The company's Incident Handling software will ship next month. Pricing starts at $25k.

Deal boosts SOA integration . . .

. . . work between Web services registry and management technology. Service-oriented architecture projects often get hung up on the link between the UDDI registry of available Web services and the tools necessary to manage them. That can hit IT budgets hard, claim Amber Point Inc. in Oakland, Calif., and Systinet Inc. in Cambridge, Mass. So the two today are jointly releasing an SOA starter pack that provides a preintegrated bundle of Amber Point Management Foundation 4.2 and Systinet Registry 5.0. At a cost of $25k, the companies claim you'll save up to $50k in SOA development costs.

SSL traffic breaches IDS/IPS security . . .

. . . because the devices can't "see" the encrypted packets. That's one big shortcoming in the false security offered by intrusion detection and prevention systems. An IDS/IPS tool reads only the "clear text" of a packet. Traffic between a server and a browser client that uses Secure Sockets Layer technology for protection just slides through. You think hackers don't know that? You think pop-up porn purveyors are unaware? Think again. The problem has been that IDS/IPS appliances had to stop and decrypt SSL packets in order to determine their safety, thus breaking the flow and ending the secure session. So they just let them pass. Until now. Breach Security Inc. in Carlsbad, Calif., today ships a Windows version of BreachView, a software module that runs on your IDS/IPS server, mirrors SSL traffic, decrypts it using secured keys and then passes the clear text to the IDS/IPS software for evaluation — all in real time. If the IDS/IPS detects a problem, it can shut down the session, alert a sysadmin or do whatever it's been programmed to do. SSL technology growth is exploding, according to Infonetics Research Inc. For some applications, it's virtually 100% of the data traffic. And it makes little sense to let it go unmonitored, as Breach Security CEO John Payne wryly observes. "After all," he says, "your most valuable traffic is what you put in SSL in the first place." Pricing starts at $5k. A Linux version of BreachView ships mid-October.

49%
Infonetics Research's estimate of corporate SSL traffic, out of total packets in 2004

↻ 49466

THE VPN SOLUTION WE PROVIDED TRANSPORTATION INSURANCE BROKERS IS DRIVING THEIR PRODUCTIVITY UP AND COSTS DOWN.

Consider the dots connected. From one coast to the other, Transportation Insurance Brokers are serving clients more securely. Sharing data more quickly. Communicating more seamlessly. And doing it all for almost $2,000 less a month, thanks to an IP-VPN solution we designed, delivered and now manage. And the strong, reliable backbone of the SBC network. Find out more about how we're helping TIB connect the dots at sbc.com/dots. **GOING BEYOND THE CALL.**

SBC

PeopleSoft's Prospects Top Agenda at Show

Pro-Oracle legal ruling raises questions about vendor's future as users gather

BY MARC L. SONGINI

AT PEOPLESOFT INC.'S Connect 2004 conference in San Francisco this week, the software vendor is expected to face questions from users about its ability to fend off Oracle Corp.'s hostile takeover bid and remain independent.

The user conference comes two weeks after a federal judge turned down the U.S. Department of Justice's attempt to block Oracle's offer on antitrust grounds [QuickLink 49350]. PeopleSoft promptly issued a letter assuring customers that it still has a number of options, and whether Oracle will succeed in its 15-month-old buyout quest is an open question.

But PeopleSoft user John Matelski isn't taking any chances. Matelski is deputy CIO for the city of Orlando, which runs financial applications that were developed by J.D. Edwards & Co. and are now part of PeopleSoft's EnterpriseOne product line.

Last week, Matelski attended the Connection Point 2004 conference held in Orlando by the Oracle Applications Users Group (OAUG). He said he wanted to ask Oracle users how they feel about their vendor. It's too early to tell what will happen, he noted, "but if

we become part of Oracle, I wanted to do the legwork."

Matelski also plans to attend Connect 2004 to learn more about PeopleSoft's payroll and human resources applications because he's considering migrating away from the Infinium Software products he now uses. Infinium was acquired by SSA Global Technologies Inc. in 2002.

In addition, Matelski said he wants to examine PeopleSoft's loosely controlled network of about 170 small user groups

that are organized by industry, product or region. Matelski sits on the board of Quest International Users Group, an independent group of J.D. Edwards users that has had a major falling-out with PeopleSoft.

PeopleSoft officials declined to comment about Oracle's bid during a briefing about a human resources software upgrade that's due to be announced at Connect (see box).

Dave Hyzy, director of IT at Benderson Development Co. in Buffalo, N.Y., said he's concerned about the possibility of Oracle buying PeopleSoft. "Of course there is fear and trepidation regarding the persis-

tent thought of a takeover by Larry Ellison," Hyzy said, referring to Oracle's CEO.

Benderson uses the World software that PeopleSoft acquired when it bought J.D. Edwards. Hyzy said the real estate developer "just spent the better part of a year groping through the morass of changes wrought by the PeopleSoft acquisition." The thought of dealing with another buyout "is sobering," he added.

On the other hand, Peg Nicholson, CIO at golf equipment maker Acushnet Co. in Fairhaven, Mass., was stoic about the situation.

"I don't worry about what I can't change, nor about what has not happened yet," said Nicholson, who runs PeopleSoft's flagship Enterprise applications. "One day, it will be resolved, and then we'll decide what options we have."

Several Oracle users said at

the OAUG's conference that they are in favor of the merger. "It will give Oracle the ability to be more competitive in the industry," said Pat Dues, a project officer for the Las Vegas city manager's office and president of the OAUG. "We see a complement between Oracle's products and PeopleSoft's." ✪ **49474**

Correction

The first name of the U.S. District Court judge who ruled against the U.S. Department of Justice's effort to block Oracle Corp.'s takeover bid for PeopleSoft Inc. was misspelled in a story in last week's News section ("Judge Rejects Antitrust Claims, Lets Oracle Pursue PeopleSoft"). The judge's name is Vaughn Walker.

Oracle Improves App Stability, Support

But users say patch installation process could be easier

BY MARC L. SONGINI
ORLANDO

Oracle Corp. is expanding the management functionality offered to users of its business applications and is working with members of the independent Oracle Applications Users Group to improve its technical support and software development processes.

The software vendor has made strides in stabilizing its E-Business Suite applications and making them easier to install and maintain, according to OAUG members who attended the user group's Connection Point 2004 conference here last week. But several attendees said they still find the installation of service pack updates containing bug fixes and other modifications to be time-consuming and trying.

OAUG board member Arthur Hunt said Oracle prefers to release large sets of software patches and updates in-

stead of incremental fixes. Hunt, who is a manager of IT systems at Yale University, noted that Oracle's approach requires a lot of regression testing to ensure that applications will continue to function after patches are deployed.

"We have found it hard, but we deal with it," said Hunt, whose IT shop runs Oracle's E-Business Suite 11.5.8 public-sector applications.

Nevertheless, Hunt added that rollouts of Oracle's applications are getting easier and that the company's technical support generally is good — as long as its internal troubleshooters have the necessary documentation. He also noted that Oracle's support staff now can access Yale's applications and do direct diagnostics instead of waiting for IT workers to send in event logs.

Installing updates could be easier if the various pieces, such as bug fixes or new functionality, were broken down and issued separately, said Brent Moody, an analyst for financial and administrative systems at Salt Lake City-

based Intermountain Health Care Inc. The nonprofit health care provider uses Oracle's human resources software.

To make the software maintenance and update process easier, IT staffers at Rochester Institute of Technology in New York use Oracle Applications Manager, a tool that runs scripts and is designed to help users identify problems.

Kimberly Sowers, an IT services manager at RIT, noted that Oracle's human resources and payroll applications often

require large patches for legal compliance reasons. As a result, the school's IT managers must plan ahead so they have enough manpower for upgrades. But, she added, "at least it's predictable."

Oracle officials didn't respond to requests for comment. Two weeks ago, the company said it's increasing the integration between Applications Manager and a separate Grid Control tool for managing systems with a mix of its software and products from other vendors (see box).

In addition, Oracle's internal customer advisory boards are working with the OAUG to get feedback on ways to improve its applications, said OAUG President Pat Dues, a project officer for the Las Vegas city manager's office.

And for three months, several OAUG special-interest groups have been piloting a process that would enable users to click on a link on Oracle's MetaLink support Web site to request software enhancements. Requests would be reviewed by OAUG volunteers for potential submission to Oracle's development staff, Hunt said. ✪ **49475**

YOUR NEXT-GENERATION NETWORK COULD BE JUST A SWITCH AWAY

More and more of your desktops, notebooks and servers are equipped with Gigabit Ethernet—but are your switches also ready for the increased demands of real-time business? Broadcom's highly integrated Gigabit technology is designed to speed the cost-effective migration from Fast Ethernet to Gigabit Ethernet, end-to-end. That's why the top 5 switch manufacturers turn to Broadcom when they need high-performance, field-proven Gigabit Ethernet chips[1] with advanced features like the industry's only built-in, real-time cable diagnostics and correction. So whether you're upgrading your entire enterprise, your remote offices or just select departments, Broadcom® technology inside your switches gives you what you need to complete your next-generation network—today.
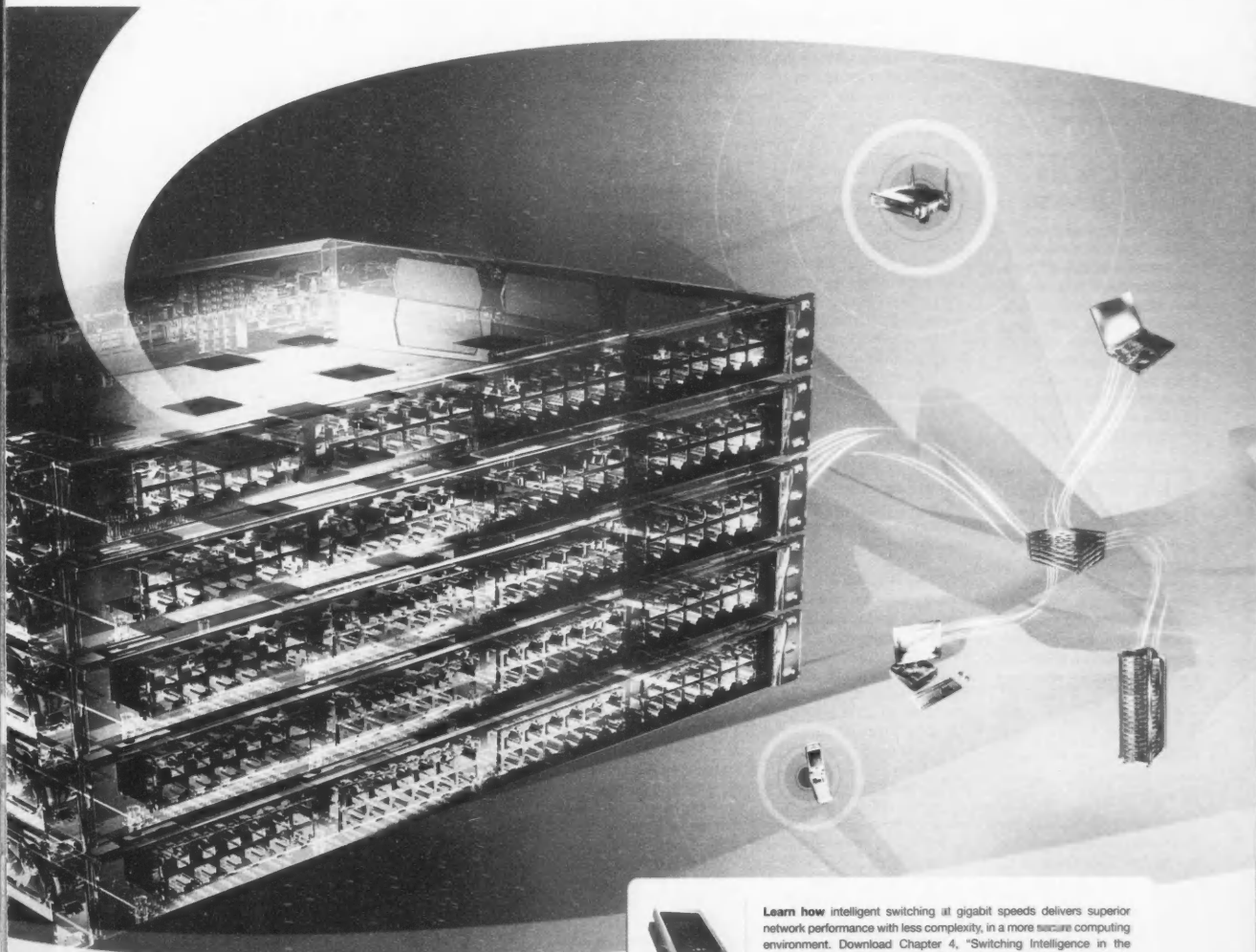
Learn how intelligent switching at gigabit speeds delivers superior network performance with less complexity, in a more secure computing environment. Download Chapter 4, "Switching Intelligence in the Enterprise," from our *Architecting Next-Generation Networks* e-book, now at www.gobroadcom.com/ebook

Broadcom,® the pulse logo, Connecting everything,® and the Connecting everything logo are trade-marks of Broadcom Corporation and/or its subsidiaries in the United States and certain other countries. All other trademarks are the property of their respective owners.

[1]Source: IDC, Network Qview, August, 2003

IBM Opens Speech Recognition Code

IBM announced plans to release some of its speech recognition development tools as open-source code. The company said it's giving the Apache Software Foundation control of its Reusable Dialog Components technology, a set of building blocks for adding basic voice-enabled functions to applications. IBM is also donating a set of speech markup editors to the Eclipse Foundation.

Oracle Adds ISV Hosting Services

Oracle Corp. launched a set of software hosting and management services for vendors that develop products on top of its database and application server technology. Oracle said independent software vendors will continue to support their applications for users. But Oracle will take over management of its software and also take responsibility for supporting third-party components.

Sales, Profits Rise During Oracle's Q1

Oracle reported a 7% year-over-year increase in revenue and a 16% profit gain for its first quarter, which ended Aug. 31. Sales of new software licenses also rose by 7% to $563 million. But sales of its business applications fell by 36%.

ORACLE BY THE NUMBERS		
REVENUE		**PROFIT**
Q1 FY05	$2.2B	$509M
Q1 FY04	$2.1B	$440M

Short Takes

NOVELL INC. announced two identity management tools, including an embeddable repository for end-user identification data. . . . **PROXIM CORP.** and **SYMBOL TECHNOLOGIES INC.** have settled patent infringement claims, with Proxim agreeing to pay Symbol $22.75 million in damages plus a royalty on future sales of some wireless LAN products.

DHS Seeks Real-World Data on Security Breaches

Asks corporate IT to detail incidents so researchers can test effectiveness of tools

BY DAN VERTON
SAN MATEO, CALIF.

THE U.S. Department of Homeland Security plans to launch several pilot projects that officials at the agency hope will help solve one of the most pressing cybersecurity research problems: a lack of real-world data about attacks.

"The cyber community has suffered for years from the lack of good data for testing," Douglas Maughan, security program manager at the Homeland Security Advanced Research Projects Agency, said last week at a conference sponsored by the U.S. Secret Service. That's why the DHS is moving ahead rapidly with a new program called Protected Repository for Defense of Infrastructure Against Cyber Threats, Maughan said.

The program, known informally as Predict, began last February and is aimed at convincing large companies to volunteer data about actual IT security incidents.

Layers of Protection

Security researchers would be able to use the information to test product prototypes, said Maughan. He noted that the government wouldn't hold the data and that companies taking part in the program could have their data "anonymized."

Maughan said the program will rely on a trusted-access process that's built around written agreements with data providers. The incident information will be stored in a data repository hosted by a third-party company, and researchers will have to apply to take part in the program.

Companies submitting data will be able to block specific researchers from accessing their information, Maughan said. He added that nearly

two-dozen organizations have expressed interest in the program, which is due to go live after Jan. 1. However, a final budget for Predict still needs to be approved.

The DHS is also spearheading the creation of a vendor-neutral cybersecurity testbed,

> ❝ The cyber community has suffered for years from the lack of good data for testing.
>
> **DOUGLAS MAUGHAN,** HOMELAND SECURITY ADVANCED RESEARCH PROJECTS AGENCY

known as Deter, that's designed to help vendors develop next-generation security technologies. So far, $14 million has been earmarked for the Deter program, Maughan said. The DHS plans to hold an industry day on Sept. 27 to answer questions about the program, and it's looking to award pilot project contracts in January.

In addition, the DHS has formed an ad hoc government and industry steering committee to develop security pilot projects for the Internet's Domain Name System. Its goal is to study specific threats and vulnerabilities to the DNS, including denial-of-service attacks, Web site hijackings and a loss of Internet coherence resulting from unauthorized root servers and top-level domains. Pilot projects are now being planned for the .us and .gov domains, Maughan said.

Security Data

The DHS wants to collect the following types of information from companies:

■ Traces of data packets and packet headers

■ BGP and DNS server data

■ Network topology information

■ Logs from firewalls and intrusion-detection systems

■ System performance and network management records

The DHS today is scheduled to hold the first meeting of its Border Gateway Protocol steering committee, which is preparing a series of projects to develop secure protocols for the Internet routing infrastructure. Maughan said the current BGP architecture makes it vulnerable to human error as well as to malicious attacks against routers, the links between routers and the management stations that control the devices. ↺ **49477**

Microsoft Updates Beta for Visual Studio 2005 Release

BY CAROL SLIWA

Microsoft Corp. has yet to release a feature-complete beta version of its upcoming Visual Studio 2005 development tools. But at last week's VSLive conference in Orlando, it announced a refresh of the existing beta release and disclosed more details about the product.

The software vendor said the Visual Studio 2005 Standard Edition will add features for building Web and mobile applications and bundle all of the programming languages that the tool supports — Visual Basic .Net, C#, J# and C++.

The standard edition of the existing Visual Studio .Net 2003 release is available only in language-specific editions, noted Jay Roxe, a Visual Studio product manager at Microsoft.

Microsoft hasn't announced pricing for the Visual Studio 2005 Standard Edition, which

is scheduled to ship in the first half of next year. There will also be Express, Professional and Team System editions.

The update of the first Visual Studio 2005 beta release adds Microsoft's modeling technology, code-named Whitehorse, and new elements of the company's Team Foundation change management and version control tools, a Microsoft spokeswoman said.

"We're actively soliciting feedback on all parts of the product," Roxe said. He added that users can log suggestions and report software bugs on the MSDN Product Feedback Center Web site.

Also last week, Microsoft announced a version of Visual Studio .Net 2003 that includes the tool's professional edition,

developer editions of Windows Server 2003 and SQL Server 2000, and Visual Studio Tools for the Microsoft Office System. Roxe said the software bundle is priced at $749, or $549 for customers who are upgrading from prior versions of the tools.

Visual Studio .Net Professional 2003 sells for $1,049, but existing customers won't be given a price break to get the extra elements that come with the special release, according to Microsoft. The bundle "is targeted at the people who haven't upgraded yet," Roxe said.

Meta Group Inc. analyst Thomas Murphy said Visual Studio .Net 2003 will be replaced by new versions in less than a year, "so this is kind of like the end-of-year model blowout sale." He said Microsoft is trying to get more users to upgrade to the products, building on Windows Server 2003. ↺ **49467**

Designed to work the way business works.

- 19" Analog/Digital TFT-LCD
- Full pivot, tilt and swivel; wall mountable
- 178°/178° — Widest viewing angle of any LCD
- MagicTune™ on-screen image control

Samsung's 193P display.

We know how business works. We've spent years researching the subject, which allows us to engineer monitors that fit the people who use them. Our 193P display is ergonomically designed to move the way people move. And with its MagicTune™ software, personalizing the display is now a hands-free experience. This kind of thinking is responsible for over 67 design awards worldwide. Not to mention, monitors that work on the same level as you.

········ Visit www.samsungusa.com/monitor or call 1-800-SAMSUNG

SAMSUNG

Insurers Use Wireless Systems To Process Hurricane Claims

Claims adjusters go into the field armed with laptops, wireless modems

BY THOMAS HOFFMAN

INSURERS increasingly are relying on technologies such as laptop PCs and wireless networks to speed claims processing for their policyholders, including homeowners and businesses in hurricane-ravaged areas of Florida.

For example, claims adjusters for The Hartford Financial Services Group Inc. used Global Positioning System equipment to pinpoint the home addresses of customers in Florida who were stranded without power or telephone service after Hurricanes Charley and Frances roared across the state.

Once customers were located, the adjusters entered information about damage to their cars into Panasonic CF-29 laptops, along with insurance claims forms and digital photos of the vehicles, said Martin Iverson, vice president of auto physical damage for the Hartford, Conn.-based insurer. Wireless modems built into the laptops were used to transmit the information to one of The Hartford's claims offices.

The data was sent via land lines to a company in Chicago that helped prepare repair estimates. The Hartford then sent e-mail messages with approved repairs to the adjusters, who could write checks to customers on the spot. The entire process took a matter of minutes, according to Iverson.

He added that the wireless-enabled laptops, which The Hartford rolled out to 187 field appraisers in June, have helped "enhance our ability to respond to these events."

"As the speed and memory capacity of laptops increases and the costs have dropped, insurance companies have looked at them as a pretty good investment for their adjusters," said John Eager, senior director of claims at the Property Casualty Insurers Association of America in Des Plaines, Ill. "They can do estimates, request checks — they're almost an office unto themselves."

State Farm Insurance Cos., the largest insurer of homes in Florida and across the U.S., has deployed about 1,200 wireless modems nationwide for its claims adjusters over the past eight months. And Bloomington, Ill.-based State Farm has bought another 1,000 wireless cards for independent adjusters contracted to help out during disasters such as Charley and Frances, said Mark Winland, the insurer's director of claims automation and procedures.

"The [wireless] coverage has become much better, and it's much less cost-prohibitive with carrier plans that offer all-you-can-eat data transmission," Winland said. The technology "has allowed our claims representatives to be more productive for our customers," he added.

Although he was not sure how much State Farm has spent on the wireless cards, Winland said the insurer "has more than seen the returns in efficiency gains and returns to our policyholders."

In parts of Florida where cellular towers were damaged or destroyed by the storms, State Farm also recently deployed 13 mobile claims units equipped with satellite dishes. Winland said that the mobile units allow adjusters and claims agents to connect to regional State Farm offices at T1 speeds, enabling them to quickly process and transmit customer claims.

Insurance companies are also making increased use of catastrophe modeling systems and predictive analytics to help forecast the cost of insurance losses for particular regions after disasters occur, according to Jamie Bisker, an analyst at Needham, Mass.-based TowerGroup. ✪ **49476**

A SATELLITE DISH is installed at one of State Farm's 13 mobile claims offices in Florida.

STATE FARM INSURANCE COS.

IETF Panel Deals Setback to Microsoft's Spam Proposal

Patent questions raise red flags about Sender ID

BY PAUL ROBERTS

An antispam technology proposed by Microsoft Corp. as a standard way of identifying the senders of e-mail messages suffered a blow this month when a group within the Internet Engineering Task Force sent it back to Microsoft for more work.

Members of the IETF's Mail Transfer Agent Authorization Records in Domain Name System working group voted two weeks ago not to proceed with the Sender ID standards proposal that Microsoft submitted in June. The group's members reached "a rough consensus" that questions about intellectual property claims made by Microsoft could torpedo deployment of the technology, according to a message posted to a discussion list for the group.

The vote by the working group, which is known informally as Marid, followed complaints by two top open-source software groups, which said they wouldn't incorporate Sender ID into their products because Microsoft's terms for using the technology violate the provisions of their licenses.

Microsoft Undaunted

In an e-mail statement, Microsoft said Marid's vote "does not mean Sender ID has been rejected." The company added that it accepts Marid's plan to look for other mechanisms for checking whether the addresses used by senders have been spoofed.

"While we would have preferred a single technical mechanism as the standard, we believe this proposal to allow multiple scopes in the protocol is a reasonable approach to provide additional choice and flexibility," Microsoft said.

Sender ID was designed to help users identify spammers who are faking a message's originating address. The technology works partly by verifying source information contained in the message "envelope" against so-called sender policy framework (SPF) records that list approved e-mail servers.

The SPF piece was developed by Meng Weng Wong, founder of Pobox, an e-mail service owned by Philadelphia-based IC Group Inc. In May, Microsoft and Meng agreed to create Sender ID by merging SPF with the Microsoft-developed Caller ID technology, which authenticates messages by checking information in the e-mail header.

Meng said he backs the IETF working group's decision because the patent threat was too big an unknown to simply pass over. He said he had repeatedly warned Microsoft about the patent issue.

Such criticisms registered with Marid members. In a message posted to the group's discussion list, Marid co-chairman Andrew Newton wrote that questions about Microsoft's unpublished patent claims in Sender ID could not be ignored and that the group would have to look at alternatives to the algorithms offered by Microsoft.

The IETF could find itself caught between the ideologically opposed Microsoft and open-source camps, Meng warned. "At the end of the day, we're trying to solve the spam problem together," he said. "If we can't do that because people have shortsighted vision, then that would be a real tragedy." ✪ **49427**

> ❝ **We're trying to solve the spam problem together. If we can't do that because people have shortsighted vision, then that would be a real tragedy.**
>
> **MENG WENG WONG,**
> FOUNDER, POBOX

Roberts writes for the IDG News Service.

Commercialization of Linux Helps Microsoft, Exec Says

BY CAROL SLIWA

Martin Taylor recently marked his one-year anniversary as Microsoft Corp.'s chief Linux strategist. Taylor, whose official title is general manager of platform strategy, spoke with *Computerworld* this month about the insights he has gained.

What are some of the lessons you've learned? I initially thought that people were really lining up Windows and Linux side by side, and they'd say, "Hey, Linux gives us better TCO." Actually, it's less about that. What they know is, "Hey, we can save money getting off Unix or off of RISC. So the question is, do we go to Linux or do we go to Windows?" That's where more of the comparison comes from. When I talk to customers and they say, "Hey, we can get better TCO with Linux," they're not always saying better than Windows. They're saying better than Unix.

Any other surprises? One other thing that's come up more over the last 12 months is this notion of indemnification [against patent and copyright claims]. More and more customers are asking us, "Help me understand what you do from an indemnification perspective versus HP or IBM or Red Hat or Novell." . . . And I began to say, "Wow. We really stand behind our technology in a pretty aggressive way. We should make sure that we get credit for that compared to Linux in many ways." And it's actually been something that tips the scales sometimes when people are on the fence.

Another thing that shocked me this year was the commercialization of Linux — in a good way, quite honestly, for me . . . because it allows us to talk more in those commercial terms. When you're getting something for free, [vendors] get a lot of "get out of jail free" cards. You [hear people saying], "Oh well. We didn't pay for it, so we shouldn't care too much about security. We'll fix it ourselves. Oh, there's no regression testing. Who cares? We'll do that ourselves." But once you start writing a check, you now have demands, and rightfully so.

What's your take on Novell? They're in this in-between period. They want to be platform-agnostic a little bit, because really their business is not NetWare. Their business is ZENworks and all the stuff that runs on top, and they wanted to do that on Windows and on Linux and on NetWare. But over time, they're going to have to really get committed to a platform and further invent that.

In Toronto in July, I had 12 top Novell resellers from around the world for about four hours and just listened. I really have to understand what's happening in the marketplace. And Novell is pushing very hard obviously to get them up to speed on SUSE [Linux]. . . . I think they are going to outpace Red Hat as the preferred Linux distribution.

So in the long term, Novell is your greatest Linux competitor? No question, because they have the best point-to-point stack from the kernel through to the application layer and things that go on top of it.

Now the challenge will be [that] they're going to need to do stuff to differentiate themselves from Red Hat, which then means that they need to find ways to basically almost have a customized distribution. And you can end up with Linux not being Linux, but Red Hat Linux being different than Novell SUSE Linux, Debian Linux and Mandrake, or whatever the case is.

Microsoft commissioned analyst firms to do reports to help you "get out the facts" about Linux. Are you still doing that? If there are facts or things that are needed, I'm going to hope that I can entice the analyst firms to go do it on their own because they think it's also important. But if they don't, then I'll commission it.

If you could turn back the clock, is there anything you would do differently? If I had one extra arm or 24 hours in parallel, I would have spent a bit more time on our Unix migration activities, because that's where you continue to see good traction from a Linux perspective. And we have a pretty good story to tell.

Are customers still complaining about Microsoft's licensing policies? I spend half [as much of] my time on licensing than I did a year ago. . . . [With] all my customers over the last two months, I might have discussed licensing three or four times, whereas it was a guaranteed conversation a year ago.
◑ 49452

MORE ONLINE

An extended version of this interview can be found on our Web site:
◐ **QuickLink 49456**
www.computerworld.com

Politically Savvy IT Managers Key to Grid Project Success

Executive Summit panelists suggest early intervention to head off user resistance

BY PATRICK THIBODEAU
PHILADELPHIA

INFORMATION technology managers embarking on grid computing projects could get some tips from the candidates in this election season. That's because political savvy is required to build support for grid projects, which tend to cover wide areas of an enterprise.

"It's like running for office," said Ben Flock, vice president of virtualization and applications frameworks at Cigna Corp., a Philadelphia-based health insurance benefits company. "You're educating a pretty broad community."

Flock said IT managers should also heed the advice in Sun Tzu's *The Art of War*: "Keep your friends close and your enemies closer." There may be people who feel that a grid project will adversely affect them, he said. "If you don't bring them to the table early, they can act like a sniper later in the day," Flock said.

Control Issues

Resistance to grid projects can stem from a loss of "ownership," say grid experts and early adopters. By virtualizing, pooling and centralizing computing resources in an enterprise, a grid implementation can lead to a business unit losing control over its IT resources, and that could fuel opposition to the project.

Flock was a panelist at a Computerworld IT Executive Summit held here last week, where IT managers shared experiences about their grid projects. In Flock's case, Cigna is undertaking a server virtualization implementation across some 3,000 servers, and that effort will ultimately lead to grid computing.

Implementing grid projects takes strong senior management support, clear and rapid deliverables, and partnerships to keep internal resistance at bay — steps that apply generally to all kinds of IT projects, Flock said.

Grids are different in some

AT A GLANCE

Grid computing projects must have the following:

- Upper management support
- Involvement of affected parties, including business unit managers
- A multidisciplinary implementation team
- Vendor knowledge transfer

key respects, though. The goal is to treat all IT resources dynamically and allow enterprises to shift computing power and data to wherever they're needed. Grids are enabled by a variety of technologies, such as virtualization, blades and storage-area networks.

However, the technologies that support grid approaches aren't mature yet, and early adopters face challenges. Among them is the prospect of being joined at the hip with a vendor, because the lack of mature standards means users will likely have to use some proprietary technologies.

"I wouldn't be presuming that there are global standards that are tying vendor products in the grid space," said Jim Gray, engineering manager at Iron Mountain Inc., a Boston-based data-protection firm. Gray said he will ask vendors about their standards plans, but at this early stage, he isn't expecting them to adhere to

development standards.

There are several ongoing grid standards efforts, including a vendor group called the Enterprise Grid Alliance. That organization has the backing of big players such as Oracle Corp., Sun Microsystems Inc. and Hewlett-Packard Co., but IBM and Microsoft Corp. are missing.

Competitive Strategies

Competition among vendors may also keep them from readily adopting grid standards, panelists agreed.

As soon as a vendor is hired, the grid project team members should start getting in-house training on its system, said Gregory Rhoney, program director at San Diego-based defense contractor Titan Corp., which is helping the U.S. Special Operations Command develop a grid system. "Make [training] a condition of your contract," he said.

Rhoney said customers
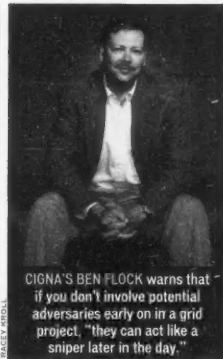
CIGNA'S BEN FLOCK warns that if you don't involve potential adversaries early on in a grid project, "they can act like a sniper later in the day."

should have people who know the vendor's system "inside and out . . . so if something happens in the future, you can protect yourself."

The team managing a grid project should be diverse but also have some deep specializations, panelists said. Cigna uses a "virtual team model" in which employees are pulled from a variety of areas, depending on the project. A grid project may include people from engineering, project management, operations and architecture disciplines. "The trick is to balance all those things," Flock said. ✪ 49470

J.P. Morgan

IBM spokesman James Sciales said IBM will still provide hardware, software and services to several J.P. Morgan business units, including its investment banking operations and its retail banking, treasury and securities services.

He added that IBM still had been investing in building up the resources it needed to support J.P. Morgan's systems. As a result, IBM doesn't expect the contract cancellation to negatively affect its financial results this year. Sciales declined to comment on whether IBM will receive a termination fee from J.P. Morgan.

When IBM announced the J.P. Morgan contract, it hailed the deal as a groundbreaking

agreement that would illustrate the value of its "on-demand" strategy for adding flexibility to corporate IT infrastructures.

Changing Needs

ZapThink LLC analyst Ronald Schmelzer predicted at the time that the deal would be IBM's "poster child" for the on-demand approach. "Poster children have pluses and minuses," Schmelzer said last week after the cancellation was announced. He added

that IBM will likely avoid any major damage to its reputation as an outsourcing vendor if the termination is seen by other users as being driven by changing needs at J.P. Morgan.

"There are a lot of companies that do big outsourcing deals, but IBM is really in a league of its own," Schmelzer said. "The whole on-demand computing plan is unique to them. Whether or not it's a long-term success depends on their ability to execute and

demonstrate returns for their customers."

Bill Bradway, an analyst at Financial Insights in Framingham, Mass., said the changing-needs explanation for the contract cancellation is believable in this case. Bank One brought J.P. Morgan a much larger retail-banking presence, and Adams is known for his do-it-yourself ethos, Bradway said.

Bradway doesn't expect the insourcing move to spark a rip-and-replace program within J.P. Morgan's IT department. "At the end of the day, what's happening is that 4,000 people will turn in their IBM badges and get J.P. Morgan ones," he said. "Many of the systems they're working on will continue to be the same ones." ✪ 49478

" We believe managing our own technology infrastructure is best for the long-term growth and success of our company.

AUSTIN ADAMS, CIO, J.P. MORGAN CHASE

Cowley writes for the IDG News Service.

Sun Makes IT Services an Integral Part of Its Offerings

BY PATRICK THIBODEAU

Sun Microsystems Inc. is broadening its IT services offerings in an attempt to become more competitive with IBM and Hewlett-Packard Co. in that area [QuickLink 43645]. The company said its services revenue grew 7% year over year and topped the $1 billion mark for the first time in its fourth quarter, which ended June 30. **Marissa Peterson**, who took over as executive vice president of Sun Services in March, spoke with *Computerworld* about the unit's strategies and plans.

What's driving the growth that you're seeing? We've worked very closely with our sales force so that they think of services more and more as an integral part of the sale versus just an add-on. We're really focused on selling solutions, and services is kind of the wrapper that puts it all together. There's also phenomenal market growth in managed services.

Unlike some of its rivals, doesn't Sun focus on services that support only its own hardware platforms? For [our new Sun Preventive Services offering], that's true. But for our overall support and services capability, we have been offering more and more the ability to support third-party equipment.

Are your managed services users primarily Sun shops, though? I would still say primarily that's the case. But the year-over-year growth of third-party support has gone up 25%. I do think heterogeneous support is the game-changer in this industry. But what's going to differentiate us uniquely is to really support Sun equipment better than anyone else. So that will be our lead strategy, surrounded by heterogeneous capability.

In terms of supporting vertical industries, where do you feel you're strong or weak? We're very focused on financial services, telecommunications, government — those are probably our top three. And we focus on education as well. Certainly, we want to go after manufacturing more. We have tried to get into retail and health care, as well as life sciences, but we've prioritized where we think we are the most capable and have the partnerships that we can build upon.

What are your plans over the next 12 months? My focus has been on delivering new services and solutions. For instance, subscription models for IT services — you'll see us offer that more and more. We're offering a storage utility, which is a pay-for-use model. In our offerings today, we provide the capability via our partners, where we actually put equipment in our partner's site and our partner meters and bills the customer for the specific utility. Going forward, you'll see us offer different types of compute utilities.

Will your partners continue to provide these utility services? We'll do it via our partners primarily, but we'll be willing to host it ourselves on behalf of our partners. We're in the process of actually building some hosting capabilities so we can do that. ◑ **49401**

A Step Toward Interoperability

Sun Microsystems and Microsoft Corp. next month plan to provide more details about the joint development work they're doing to make their products more interoperable.

The announcement will focus on interoperability in the Web services and directory services areas, said Mark McClain, vice president of software marketing at Sun, during a meeting with reporters and analysts at Sun's offices in Burlington, Mass.

The two rivals are slightly behind schedule on the interoperability work, which they agreed to as part of a broad legal settlement that was signed in April [QuickLink 45957]. Sun CEO Scott McNealy said at the Java-One conference in late June that the companies would detail their initial collaborative work during the summer.

"We're going to miss that summer target," a Sun spokeswoman acknowledged last week. "As happens when large organizations are working together, things take a bit longer."

But when the announcement is made, Sun and Microsoft will be able to demonstrate at least some of the planned interoperability between their respective technologies, the spokeswoman added.

"We want to make sure that it's a solid announcement," she said.

– Joris Evers and Tom Krazit, IDG News Service

IT Key to Patient Care At High-Tech Hospital

Heart facility puts PCs in every room, uses GE software to automate records

BY TODD R. WEISS

BY BUILDING one of the world's first all-digital cardiac care facilities, St. Francis Heart Hospital in Tulsa, Okla., has made it possible for doctors to access patient data from anywhere inside the hospital, at home or off-site via a wireless network.

The hospital, which opened in April, was built with IT systems in mind every step of the way, according to St. Francis officials. The 52-bed facility has installed 70 servers and more than 275 PCs, and each patient room is equipped with a PC and Internet access. In addition, the hospital has 12TB of storage available for data and medical images.

St. Francis announced the details of its IT setup last week in conjunction with General Electric Co.'s GE Healthcare unit, which supplied the clinical applications that are being used to integrate patient information into electronic medical records and automate the process of prescribing medications.

The hospital's goal is less paperwork and better patient care. "By using all this technology, we're giving doctors and clinicians their time back so they can have more human interaction [with their patients]," said Robert Schad, an IT team leader at St. Francis.

Patient Care Concerns

Hospital officials expect the paperless approach to help them address several care-related problems, including concerns that doctors don't spend enough time with patients and that illegible handwriting on charts or prescription orders could lead to medical errors.

"We had an opportunity as a brand-new facility to partner with GE and face both of these concerns," said St. Francis CEO Bob Dolan. He added that doctors have said they can make their rounds 30% faster than they can at facilities with less of an emphasis on IT.

GE Healthcare's Centricity Clinical Information System software also enables the hospital to update medical records with lab test results about 30 minutes after the tests are taken, St. Francis said. In addition, the admissions process is fully automated and can typically be completed within 10 minutes.

Most of the systems installed at the hospital run Windows 2000 or 2003, although some Linux boxes are also in use. A wireless network extends throughout the facility, and St. Francis also has more than 500,000 feet of cabling for its wired networks.

Brandon Savage, GE Healthcare's general manager of enterprise solutions for clinical information technologies, said the vendor also equipped Indiana Heart Hospital in Indianapolis with its digital health care systems technology.

Dr. Thomas Handler, a radiologist who works as an analyst at Gartner Inc., said the health care industry has been trying to move to more fully automated clinical systems for years. But it has been hard to do because of high costs and

the complexity of disparate systems, he added.

"This is a wonderful proof of concept," Handler said. He noted, though, that the specialized focus on cardiac care at St. Francis and Indiana Heart means they have more money to invest in such projects than other hospitals do.

In addition, one potential

shortcoming with GE Healthcare's offering is that the vendor obtained much of its technology through acquisitions and then created interfaces to allow the different systems to work together. "From a CIO perspective, that's a fairly complicated system they've installed in that place," Handler said. ○ **49409**

Boston Hospital Will Track Assets With Wireless System

BY LINDA ROSENCRANCE

Beth Israel Deaconess Medical Center, a busy hospital in Boston, needed a way to more efficiently track the location of costly medical equipment — and to keep tabs on patients and its medical staff. But the hospital also wanted to leverage an ongoing investment in wireless networks to avoid any technology redundancy.

So John Halamka, CIO at parent company CareGroup Inc., is turning to a new asset tracking and visibility system built around wireless LANs and radio frequency identification tags. The system, which was announced last week by PanGo Networks Inc., uses an infrastructure of 802.11 wireless access points as its reader network. That eliminates the need for single-use RFID read-

UP TO $400K worth of equipment is misplaced each year, says Halamka.

ers, according to PanGo.

The Framingham, Mass.-based vendor said its PanGo Locator system provides map-based views of assets that users can drill down into on a floor-by-floor basis. Users can get detailed data about individual assets by clicking on their map images, and the system logs and stores activity data for reporting and analysis.

PanGo is offering a version of its technology tailored for hospitals, and Beth Israel is one of the pilot sites. The two-campus hospital "has probably millions and millions of dollars of mission-critical equipment," Halamka said. But between $300,000 and $400,000 worth of the equipment disappears each year, "because in the course of normal care, it gets misplaced," he added.

"What RFID does, in an active way, is to say right now where our equipment is."

Beth Israel is currently working on campuswide WLAN deployments to provide wireless voice-over-IP and location-based communications services, as well as improved data connectivity, said Halamka. The hospital bought WLAN technology from Cisco Systems Inc., which is working with PanGo to deliver a turnkey system.

Installation of PanGo Locator is due to start later this month at Beth Israel, said Richard Barnwell, PanGo's chief technology officer. The hospital initially will use the geolocator technology in its emergency room and cardiac care unit to track mobile medical equipment, Barnwell said.

He added that the system will also monitor the locations of medical staffers to help hospital officials analyze workflow. During the pilot phase, people will be given pagerlike devices containing the RFID tags. Later, the tags could be embedded in wristbands or

attached to neck cords.

Halamka said Beth Israel also plans to use PanGo's technology to track the whereabouts of patients. As part of the project, the hospital will integrate patient location data with its electronic whiteboard, a 50-in. plasma screen that shows detailed information about each patient — although only initials are used to protect privacy.

"Now, we'll not only be able to show that Mrs. Smith has had this lab result and is going to be admitted to cardiology but that the patient is currently in radiology receiving a test," Halamka said. "There's a lot of workflow optimization just making your emergency room work better because you can coordinate all the care-givers and all the patients."

Halamka said Beth Israel's investment in WLAN infrastructure was a big factor in its decision to choose PanGo's system. "I can say the wireless network is already there, and now it does something else," he said. "That's a huge win for me as a CIO." ○ **49436**

Pentagon's Logistics Agency Begins $290M IT Consolidation

HP to streamline systems, centralize infrastructure

BY LINDA ROSENCRANCE

The U.S. Defense Logistics Agency (DLA) last week said it has awarded Hewlett-Packard Co. a 10-year, $290 million contract to install and manage a unified IT infrastructure that will consolidate the agency's data centers, servers, applications and storage devices.

The Enterprise Data Center (EDC) program is designed to create a streamlined IT setup agencywide for the Fort Belvoir, Va.-based DLA, which provides supply chain support as well as technical and logistics services to the U.S. military, several federal civilian agencies and some foreign governments and international organizations.

Mark Philip, the agency's EDC program manager, said the IT consolidation initiative is aimed at reducing technology costs and modernizing the DLA's systems so its units can operate more efficiently and better serve their customers.

"We looked at our [IT] operations, and we found there were areas we could make improvements in," Philip explained. "We weren't always optimizing and modernizing the infrastructure across the enterprise."

Paring Down

The EDC project will pare about 2,300 existing servers down to 400 machines, Philip said. Most applications and storage devices will also be consolidated and migrated with the servers to new centralized IT facilities that HP will set up and run for the DLA. "To do that will save a lot of money," Philip noted.

In addition, the consolidation project is expected to enable the DLA to more effectively implement information assurance programs and expand its disaster recovery and business continuity capabilities, according to Philip.

The agency's contract with HP covers five years upfront and includes options for five one-year extensions. HP will do the IT consolidation and migration work in stages in an attempt to avoid disrupting the DLA's business operations.

The first migration will involve systems at the DLA's headquarters and several field operations, including the agency's Defense Energy Support Center and Defense Logistics Information Service. Consolidated systems for those units are expected to be up and running within seven months, the DLA said, adding that the entire IT infrastructure makeover is due to be completed by August 2006.

The DLA is also working to modernize its business systems through a $500 million project that began four years ago and includes the installation of ERP, supply chain and procurement applications from vendors such as SAP AG and Manugistics Group Inc.

DLA officials said a "concept demonstration" phase that began in mid-2002 now involves 250,000 supply items and nearly 1,200 registered end users. The agency plans to begin full-scale deployment of the applications in January, pending approval from the secretary of Defense's office. By September 2006, the modernized systems are expected to support management of 5.2 million items by more than 5,000 users. **49431**

> **We looked at our [IT] operations, and we found there were areas we could make improvements in.**
>
> **MARK PHILIP,** EDC PROGRAM MANAGER. DEFENSE LOGISTICS AGENCY
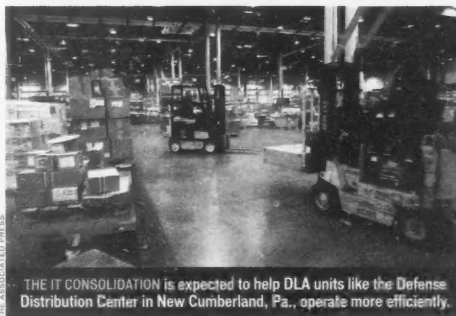
THE IT CONSOLIDATION is expected to help DLA units like the Defense Distribution Center in New Cumberland, Pa., operate more efficiently.

THE ASSOCIATED PRESS

DON TENNANT

A Moving Experience

I'M A SENTIMENTAL FOOL. As we pack up to move to our spacious new digs a few blocks away, it seems every item I lovingly place in the moving crates opens another floodgate of fond memories. I need to pack everything very carefully because my colleagues took away my packing materials. (I think they're just jealous that *they* can't play "She Bangs" with a piece of bubble wrap.)

Here's the "Speedo" nameplate that adorned my cubicle wall throughout my tenure as News editor. The nickname stuck after I issued the disturbing warning early on that if our writers didn't file their stories on time and up to our exceedingly high standards, I would come into the office wearing a Speedo. It's amazing what the threat of seeing a middle-aged guy in a bathing suit will do for newsroom productivity. Can you say "Magazine of the Year"?

What's this? Ah — the transcript of my April 2003 interview with Novell CEO Jack Messman. That one was nothing if not entertaining. In the interview, Messman called Linux an "immature operating system" that needed Novell's steady hand and fatherly guidance to help it grow up into a robust, enterprise-ready OS. Within a few days he'd received so much hate mail from Linux enthusiasts (I would say "Linux loonies," but there's no sense in generating more hate mail) that he had to issue an oops-what-I-*really*-meant-to-say apology [QuickLink 37902]. What a hoot.

Well, what do you know? I was wondering where this was. Here's my signed copy of Bill Gates' book *Business @ the Speed of Thought*. I got it after having hooked up with the Big Guy for an interview on a chartered boat from Guangzhou to Hong Kong a while back.

I have an idea, and I'm absolutely serious here: Let's auction it off to the highest bidder, with 100% of the proceeds going to The ALS Association (*www.alsa.org*). That's ALS as in amyotrophic lateral sclerosis, better known as Lou Gehrig's disease, an advanced form of which has afflicted my dad, who's a really good guy. I know he'd appreciate it. So e-mail your bid to me by Oct. 1. I'll announce the top bid in the Oct. 11 issue, and the winning bidder will get the book upon providing me with proof of a contribution to the ALS Association in the amount of the bid. Deal?

That reminds me of something I just have to share. You know what kind of book Gates writes. But did you ever wonder what he reads? On that boat to Hong Kong, I noticed that he was carrying a paperback, and being the nosy sort, I strained to see the title. It was a book of tips for playing better bridge. I asked him about it, and he said he was going to his friend Warren Buffett's house that weekend to play bridge and was prepping. Can you imagine? If I was a billionaire, bridge would be about the billionth thing down on my list of things to do.

Speaking of to-do lists, I know you have about a billion things on yours, too. But I would still encourage you to budget a few minutes to check out our CRM Knowledge Center, which begins on page 33. Our unique coverage of how CRM challenges differ across seven vertical industries is a compelling read, regardless of the status of your customer-facing systems. Check it out and let executive editor Mitch Betts, our Knowledge Center shepherd, know what you think, at mitch_betts@ computerworld.com. ⏱ 49442

Don Tennant

CAPTAIN! — WE'VE PICKED UP ANOTHER REFERENCE to "LINUX LOONIES."

PREPARE the HATE MAIL AIRDROP, COMRADE.

VIRGINIA ROBBINS

Want to Be Valued? Think Small Business

LUNCH WAS FABULOUS. One of the top salesmen at my former company had called to ask me to lunch because he wanted me to meet the CFO at his new company. I was thinking we'd have a couple of salads and, if I was lucky, dessert. Instead, he had brought me to one of the best restaurants in town.

The carrot soup was incredible, the crab awesome. The conversation was even better.

My former colleague is now working for a well-established, privately held and publicly regulated company that's expanding into new markets. The company has about 100 employees in 12 locations, annual revenue of just under $5 million and an IT staff of two.

To support the new market expansion, the company began automating its key processes.

Five major automation projects had been completed in

the past 30 months. While some work, such as developing a new Web site and e-commerce functions, had been outsourced, most things were implemented and supported by the two IT staffers. This wasn't a case of a disappearing IT department. This small company had leveraged an extremely useful and focused team to add strategic and tactical value. Every part of the business had changed since the new systems had been implemented, and in the CFO's mind, they had changed for the better. Processing costs were lower, services were improved, old customers were happier, and, in general, the new stuff worked most of the time.

Until that last comment, I was wondering why the salesman had invited me to lunch. I was so impressed with their efficiency, I felt like I should pick

up the tab. But the CFO needed my help. The two IT staffers couldn't keep the systems running reliably; uptime was OK, but not good enough for new customers. The salesman was losing sales.

The CFO knew this, and as we started talking about his team members and their challenges, I could tell that he was still really proud of what they had accomplished. He truly valued their contributions, but he was struggling to avoid the expense of additional staff. The CFO didn't want to spend any more than he absolutely had to. As he talked about what he could expect in the company's next round of regulatory reviews, it was clear he suspected that his team wouldn't receive satisfactory ratings. And we all agreed that the two IT guys had put so much of their lives into launching the new systems that any material findings would make them feel like failures.

So we talked about low-cost ideas that can increase uptime and reduce the support burden on a small IT team. We discussed how to foster and deploy departmental power users, how to launch brown-bag training sessions for staffers and how to increase a small company's influence by volunteering for vendor testing or assisting with user group conferences. We also discussed longer-term strategies, including industry averages for staffing and expense ratios and for capital investments. We ended lunch, and the CFO left thinking of ideas about how to help his team, including possibly adding another staffer.

So while others are talking about disappearing IT departments, whether IT matters or offshore outsourcing, here is a company that is growing and cares about its IT staff. Next time you're looking for a job, think small businesses. You'll need to be ready to work hard, but your contributions will be noticed and, in most cases, deeply valued. ◐ **49360**

MICHAEL GARTENBERG

iPaq 6315 Connects in Many Ways

LAST MONTH, I discussed the importance of ubiquitous connectivity in portable devices. Hewlett-Packard delivers on this vision of überconnectivity with the iPaq 6315, currently available from T-Mobile. The 6315 is unique in that it provides no fewer than four methods of connectivity: infrared, Bluetooth, Wi-Fi and GSM/GPRS. No other device currently offers road warriors such a collection of integrated mobile services. From a functional perspective, the 6315 is a primary data device with telephony capabilities that offers maximum flexibility for connectivity. If voice is your only critical function, you might be better served with a small cell phone combined with a Bluetooth-enabled PDA or a separate data-centric device like a BlackBerry or an all-in-one unit like a Treo or Sidekick.

The iPaq 6315 is smaller than it looks in photos and much smaller than other Pocket PC phone devices. It's not as small as the Treo 600 but has a much more usable display. Voice reception is excellent. I was able to get a signal even in the basement of my home.

But the key to this unit isn't telephony; it's everything else combined. Using Bluetooth, I was able to mitigate the fact that the unit is more of a PDA than a phone by using a Bluetooth

MICHAEL GARTENBERG is vice president and research director for the Personal Technology & Access and Custom Research groups at Jupiter Research in New York. Contact him at mgartenberg@optonline.net. His weblog and RSS feed are at http://weblogs.jupiterresearch.com/analysts/gartenberg.

headset, and I was also able to ditch the connectivity cradle by syncing wirelessly with my laptop.

On the road, I used a Navman Bluetooth GPS unit linked to the 6315 to keep me on course, and a full-size, collapsible Bluetooth keyboard from Think Outside for writing lengthy e-mails and report drafts.

With Wi-Fi, I could connect at fast speeds when near a hot spot and then use the slower GPRS data connection for e-mail, the Web and instant messaging when I wasn't near a hot spot. The unit automatically detects the fastest connection and uses that. As a bonus, I could also use Wi-Fi to make calls via a soft-phone application tied to a voice-over-IP account and make and receive them anytime I was within reach of a Wi-Fi signal.

It's this level of communications flexibility that makes the 6315 shine. Add in push e-mail from T-Mobile (or the ability to tie in with corporate Exchange systems) and the inclusion of instant messaging clients for all the major services, and you have the most flexible communications platform on the market.

The Pocket PC operating system from Microsoft is both a plus and a minus. The multitasking flexibility, which isn't currently available on the Palm OS platform, meant I could be writing a weblog posting while simultaneously downloading RSS feeds, updating e-mail and keeping a VoIP application running in the background. That also means it's a more complex device, and there were times when one of the wireless subsystems shut down, necessitating a warm reboot. There were a few other small glitches: The unit claims to support the Bluetooth HandsFree profile, but I couldn't get it to work with the Bluetooth built into my car. I also couldn't sync over Wi-Fi (although others claim success in doing so).

The 6315 is a breakthrough, thanks to seamless connectivity and clever engineering. I suspect that by the end of the year, there will be some contenders against the 6315 from a variety of vendors. At the moment, the ability to have multitasking functionality, seamless network switching, great coverage and four different connectivity solutions in one device is very compelling, and the 6315 has this market all to itself. ◐ **49317**

WANT OUR OPINION?
More columnists and links to archives of previous columns are on our Web site: www.computerworld.com/columns

READERS' LETTERS

Damage Control

THE ARTICLE "A CXO Syllabus" [QuickLink 47888] contained inaccurate information regarding The Bank of New York's backup capabilities for critical operations. Our company is often cited as a leader in business continuity planning. In fact, in reviewing our pre-9/11 plans, IBM concluded that we were able to "conduct one of the most extensive, successful business recoveries ever undertaken." Our success at the time was the result of detailed disaster plans that were carefully followed.

Since 9/11, we have built new facilities and expanded existing operations centers and fully configured hot sites in multiple states. Our geographic diversification now provides immediate backup capability for critical operations through a number of key facilities spanning 1,000 miles.

Our data centers are separated from business operations and dedicated solely to processing functions. All critical equipment components are redundant. We use remote real-time mirroring of programs and data. Our philosophy calls for "zero data loss" and continuity of communications and business operations in our recovery processes. We have diversity in our telecommunications circuits for continuous connectivity to our clients. We also have dual diverse Internet connections at our major data centers and access to alternative telecommunications providers.

Jeffrey Kuhn
*Senior vice president,
business continuity planning,
The Bank of New York Co.*

BI Believer

I DON'T MAKE A HABIT of congratulating people for a job well done, but Mark Hall provided amazing insight into the business intelligence world in his column "Doubtful BI" [QuickLink 46902]. I would go so far as saying that if people can read only one article about BI, this should be it.

Saqib Mausoof
*BI manager, Esurance,
San Francisco*

Hands Off

THE STORY "User Interfaces: The Next Generation" [QuickLink 48484] brings to mind a passage from Douglas Adams' book *The Hitchhiker's Guide to the Galaxy*. In it, he describes how the "user interface" for the radio had progressed far beyond the "old-fashioned" buttons and levers. Now all you had to do was wave your hand in the direction of the radio to change channels. The result was that you had to sit infuriatingly still if you wanted to continue to listen to one station. I would hope the folks working on new computer interfaces keep that in mind. A gesture-controlled ATM could easily result in unintended actions. Even better, who is going to be first to patent a hand gesture? You don't want one gesture to set off two or more home appliances or applications.

Kent Wick
*Unix system administrator,
Austin*

COMPUTERWORLD welcomes comments from its readers. Letters will be edited for brevity and clarity. They should be addressed to Jamie Eckle, letters editor, Computerworld, PO Box 9171, 1 Speen Street, Framingham, Mass. 01701. Fax: (508) 879-4843. E-mail: letters@computerworld.com. Include an address and phone number for immediate verification.

For more letters on these and other topics, go to www.computerworld.com/letters

SAS, the leader in business intelligence software, asks...

Could your IT dollars be better spent?

SERVICE LEVEL MANAGEMENT

RESOURCE MANAGEMENT

CHARGE MANAGEMENT

VALUE MANAGEMENT

No business wants to believe it's wasting precious IT dollars. So if executives and co-workers grumble about IT service, and you're convinced those services could be put to better use, let SAS help. With SAS® IT Management solutions, you can measure, manage, understand and communicate the quality of every IT service more accurately. You'll know precisely how your business is using IT resources. Ensure maximum performance and response times. Predict strategic and financial trends. And clearly visualize the value of IT from business, revenue and profit perspectives. Visit our Web site to learn more and read our free white paper, *Align IT with Business and Budget Strategies*. Or call us toll free **1 866 731 1364**.

www.sas.com/spent

Author Nicholas Carr and top business influencers join in a lively discussion about his controversial book, Does IT Matter? Check out our Web site for more on this informative, on-demand Web seminar.

SAS 9

The Power to Know. | §sas.

OUTLOOK: The technology is just beginning to gain ground for applications such as e-books and in-store signage, but broader uses have yet to appear. By Linda Rosencrance

EMERGING TECHNOLOGIES

FOR YEARS, ANALYSTS have been predicting that electronic paper, or e-paper, would set the stage for the paperless office. Until recently, however, developing a paper substitute was not an easy proposition. And even today, business applications of the technology remain limited.

E-paper is a thin, flexible polymer sheet with the look of paper. But e-paper is a bit thicker than regular paper and weighs more because it contains microscopic electronic ink particles sandwiched between two polymer sheets that display as either white or black in response to an electrical charge.

E-paper is reflective, like real paper, so it can be read in any light. It uses no backlighting, as LCDs do, nor does it use an emissive light source, as with a CRT monitor, says Tom Ashley, director of Pivotal Resources USA, a Lexington, Ky.-based research firm that follows the digital printing market.

E-paper is also bi-stable, which means that the display uses power only to change the content. Once the image is created, it stays there, even when the power is turned off, Ashley says.

"Those two main characteristics are what give a paperlike display its good qualities — it's comfortable to read because it's reflective, and the bi-stable aspect allows you to have low power and lightweight batteries so the whole device could be extremely thin and lightweight," Ashley says.

Several companies are developing commercial applications of e-paper technology. SmartPaper, an e-paper technology from Ann Arbor, Mich.-based Gyricon LLC, first appeared in an e-paper pricing-

sign system for retail stores in May. The sign is controlled by software that links it wirelessly to in-store pricing databases, says Robert Sprague, chief technology officer at Gyricon, a wholly owned subsidiary of Xerox Corp.

"We'll replace the paper pricing signs on each retail rack in retail stores with an electronic paper sign, which is wirelessly networked to the store's central computer so the price on the sign can be updated instantly. And it's always the same as the price in the point-of-sale database," Sprague says.

"This gives IT departments a way to control a lot of signage and information around an entire building or campus from one centralized comput-

SyncroSign

SyncroSign merchandiser Free Style

Gyricon's e-paper price signs receive updated pricing information wirelessly for display on retail store shelves.

TAKING STOCK OF E-paper

Inside E-paper

Electronic paper is a thin, flexible sheet with the look and feel of paper. It contains microscopic particles that display as either white or black in response to electrical charges. E Ink and Gyricon both offer products. The basic technology the vendors use is the same, but each takes a slightly different approach.

E-INK

- TOP ELECTRODE (TRANSPARENT)
- WHITE PIGMENT CHIPS
- CLEAR FLUID
- BLACK PIGMENT CHIPS
- BOTTOM ELECTRODE

LIGHT STATE   DARK STATE

E Ink's e-ink consists of millions of microcapsules about the diameter of a human hair. These clear capsules contain a clear fluid, as well as tiny black and white particles. The two colors each carry opposite charges. When an electrical field is applied, the particles move up and down within the capsules. A negative electric field makes the white particles move to the top of the microcapsule, where they are visible to the user. A positive charge pulls the black particles to the bottom of the microcapsules, hiding them. The technology is used for e-paper and can be embedded in electronic displays.

SOURCE: E INK CORP.

SMARTPAPER

PLASTIC SHEET

ELECTRODES

OIL-FILLED CAVITIES

Gyricon's SmartPaper consists of two sheets of thin plastic with millions of tiny beads embedded between them. Each bead, smaller than a grain of sand, has a different color on each side. The hemispheres also carry opposite charges. Each bead resides in its own oil-filled cavity within the flexible sheet, and under the influence of a voltage applied to the surface, it rotates to present one side or the other to the viewer. The image stays in place until a new voltage pattern is applied, which erases the previous image and generates a new one.

SOURCE: GYRICON LLC

---

ing point," Sprague adds.

Gyricon also offers SmartPaper in a line of dynamic message boards, which it sells to hotels, conference centers and large campuses, he says. The message boards sell for $1,295 each.

The E-book

In April, Cambridge, Mass.-based E Ink Corp., Amsterdam-based Royal Philips Electronics and Tokyo-based Sony Corp. together launched their first-generation e-ink display in Sony's e-book reader, the Librie, in Japan. The e-book incorporates the e-ink technology used in e-paper into a traditional display.

E Ink's electronic ink is a proprietary material that is processed into a film for integration into electronic displays.

"For the Librie product, we make our e-ink as a film, a sheet of plastic that gets sold to Philips Electronics. Philips makes the display, and then the display is sold to Sony and put into an electronic reader," says Darren Bischoff, E Ink's marketing manager. "We're part of an enabling component for making that a paperlike reading experience."

Currently, users can download and store 500 books of about 250 pages each to the Librie e-book reader, which

This e-paper message board from Gyricon requires very little power to maintain a static image. Current technology is limited to black and white.

is similar in size and design to a paperback. The cost of the device is approximately $370, but Sony has no plans to release it outside of Japan.

Both E Ink and Gyricon have developed electronic shelf labels that can change prices automatically. E Ink's labels are wirelessly tied into the store's pricing system, Bischoff says.

E Ink's ultimate vision is to develop a next-generation smart paper, which

E Ink calls RadioPaper, in the next several years. "Now we can make something that visually looks like paper, but we want something that feels like paper as well," Bischoff says.

E Ink's current e-paper looks like paper in terms of high contrast and a reflective surface that can be read at any angle, he says.

"The majority of the development to create something that is closer to the feel of paper has to happen with materials and developments other than the electronic ink component," Bischoff says.

To that end, E Ink is working with Philips' research department to create thin, flexible, rollable e-paper.

E Ink predicts that displays made with its e-ink technology will eventually appear on electronic devices ranging from handheld computers to cellular phones, calculators, digital watches and car dashboards.

Fujitsu Laboratories Ltd. in Kanagawa, Japan, is developing a paperlike display that it says could be used with a terminal for reading business documents downloaded from a PC, says spokesman Isao Hirano. The paper should be in production by 2006, and Fujitsu is bullish on its prospects. "We expect that this invention would pave

the way to a paperless office and reduce paper consumption," Hirano says.

Although e-paper technology is progressing, there are some downsides. One is that e-paper lacks color, says Pivotal's Ashley. And while e-ink has been incorporated into displays such as the Librie, the bi-stable e-paper technology can't support full-motion video because updating or rewriting a page takes too long, according to Kenneth Werner, editor of *Information Display Magazine*, published by the San Jose-based Society for Information Display.

Today, e-paper is still looking for a killer application. While a few retailers are experimenting with e-paper pricing labels, the technology has yet to catch on. But that could change.

"In three to five years, we'll see second-generation technologies from the companies that are launching products now that will probably have better characteristics, reduce costs and add flexibility to the mix," Ashley says.

🔾 49387

THE PROBLEM WITH E-PAPER

The technology is still striving to find a viable business application:

🔾 **QuickLink 49205**
www.computerworld.com

> With Sprint, Geek Squad at Best Buy is beautiful.
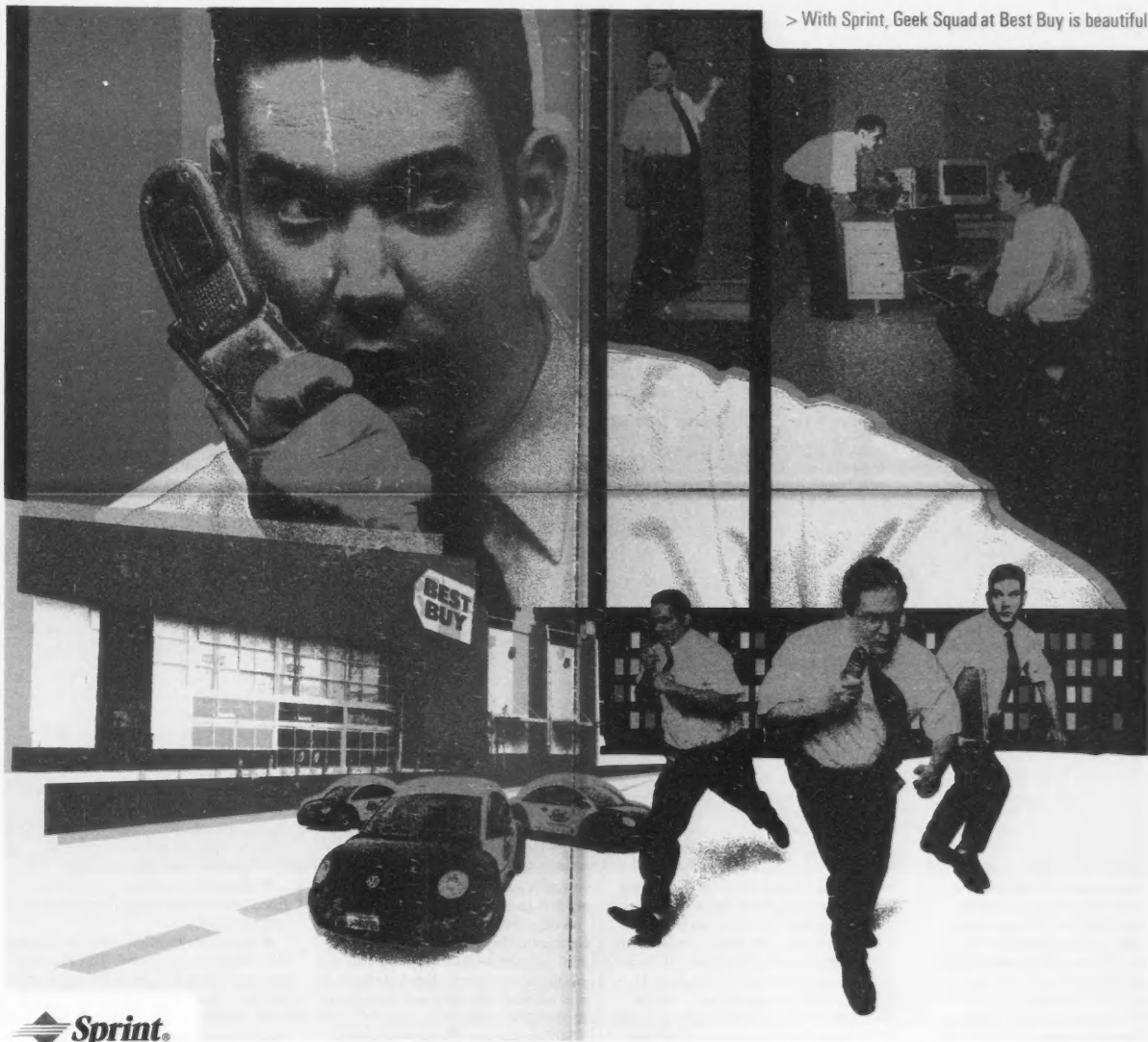
Sprint

Geek Squad,® a 24-Hour Computer Support Task Force found at Best Buy, depends on Sprint to take care of business. Armed with Sprint PCS Ready Link℠ Phones, Agents can stay linked with walkie-talkie-style communication. And when they need more detailed technical information, Sprint PCS Connection Cards™ provide high-speed wireless access, linking them to their company intranet, which can provide the same data access they'd have in the office. Sprint technology helps Geek Squad expedite solutions, improve customer service and efficiently handle over a thousand customers a day. And a fast, connected Geek Squad is, in our opinion, beautiful. With Sprint, **business is beautiful.**℠

> Visit Sprint.com/beautiful for case studies or call 877-777-5568 >

KEITH SPITZ

Lessons Learned by A CRM Veteran

I HAVE SPENT much of the past eight years working with CRM systems and have a lot of faith in the promise of the technology. But realizing that promise requires a commitment that many companies aren't prepared to make.

At a previous employer, a software development company, I was actively involved as a software engineer in three different CRM implementations, although all three used the same product.

When the need for a CRM system became clear, we selected a product that had been effectively implemented by another company with a similar business model.

Our first project, which took six months, included only the sales department. Later releases, staggered over the next year, integrated technical support, product distribution, finance and — to a lesser degree — marketing.

But after a couple of years of working with this system, we realized we had a model that was flawed in two key areas.

First, it focused on serving individuals as customers, rather than companies as customers. This became a problem as our business strategy changed and we entered into larger deals selling software to development companies rather than to individual developers. Second, the overall implementation was built piecemeal, focusing on the needs of each department. The resulting system didn't allow us to smoothly move work among departments. So we tried again.

For the second implementation, my company invested significant resources to design a system with the complete involvement of all current and potential client groups.

We completed a design that met the requirements of marketing, sales, technical support, professional services, software development, product distribution and finance. And it met the needs of our U.S., European and Asian operations.

KEITH SPITZ is a software engineer at Wall Street on Demand Inc. in Boulder, Colo. You can reach him at Keith.Spitz@callat.com.

But it didn't take long to realize that we hadn't built the ultimate system we had envisioned. The overall complexity of the product introduced some significant process issues, and it wasn't amenable to the rapid changes the company wanted. So we tried yet again.

For the third implementation, we tried software that was as "out of the box" as possible. We focused the system design on sales, where we had experienced most of the pain with the existing system. We upgraded to the latest version of the software, which significantly improved the user interface. We also vowed to adapt our processes to the product to minimize customization.

A third-party process consultant with significant CRM experience was brought in to help us design a workflow that met the specific needs of sales and would fit well with the strengths and weaknesses of our CRM product.

Still no success. The new software, though more user-friendly, was relatively immature; the sales process, carefully designed though it was, wasn't consistently followed. And the out-of-the-box vendor solution simply wasn't robust enough for an implementation of our size and complexity.

So three tries, three failures. What went wrong? I have identified the following:

Workstyle differences. And our efforts were further complicated because the people involved in the project were spread around the world.

Lack of adequate off-line and integration tools. Although this is due in large part to the limitations of our CRM product, it is, I believe, a problem commonly faced by most CRM implementers.

The process resistance of sales teams. I don't want to offend my sales colleagues — I see the roots of this behavior in the nonprocedural and independent nature of their work.

The rate of desired change typically exceeding our ability to implement it. Eventually, this led to an environment in which IT resisted, rather than embraced, change.

Poor data quality control. My company didn't pay nearly enough attention to entering data into the system correctly and maintaining its integrity.

The failure of consensus design. Our "design by representation" ended up being built by representatives without sufficient authority and influence to effectively champion the proposed design.

Failure of policy enforcement. A CRM system will work well only if it's used consistently.

Despite all these flaws, it's possible to implement an effective CRM system, but only under the following conditions:

- The benefits expected from the CRM must be clearly identified.
- Consistent processes must be defined (even if their granularity is coarse) and enforced.
- Sufficient attention must be dedicated to data quality control. This is one of the most critical — and most easily overlooked — keys to success.
- Process and tool "rough spots" must be recognized and resolved quickly.
- Customization must be minimized. Just remember that there is an ongoing maintenance obligation created by each line of customization you add.

No two CRM implementations will be the same. But many aspects of CRM design and implementation will remain the same across products and industries. Success depends much more on your ability to think broadly and speak persuasively than on the features of the CRM system you select and the technical skills of your team. ⊙ 49421

MORE ONLINE

Smart CIOs are applying the lessons of just-in-time inventory and portfolio management to IT staffing. The result: maximum flexibility and minimal trauma.
By Steve Ulfelder

THE Elastic IT Staff

E LASTICITY has become a much-sought-after trait for IT organizations. With technology priorities driven more than ever by business demands, a CIO must be able to direct resources — including employees — wherever they are needed. This has to happen quickly and smoothly, with staff feather-ruffling kept to a minimum.

The elastic IT organization combines the ideas behind just-in-time inventory planning and portfolio management. CIOs attempt to have just the right quantity of human IT resources, deployed precisely when and where they're needed most. And they treat IT projects not as discrete efforts, but rather as components of an overall service-delivery organization.

According to pioneering IT managers and other experts, it's these factors that differentiate genuine elasticity from the age-old tactic of rounding up contractors or inking an agreement with a systems integrator.

The good news is that CIOs today have a wealth of staffing options: full-time employees, part-timers, contractors and outsourcers — both on- and offshore. The trick is to leverage these elements to create a sort of human on-demand IT organization that satisfies business and budget requirements while providing career growth for workers. It's a challenge, but one that smart IT leaders are meeting.

> ## What I'm hearing from hiring managers is, 'We want options.'
>
> KATHERINE SPENCER LEE,
> EXECUTIVE DIRECTOR,
> ROBERT HALF TECHNOLOGY

The business realities that have created this need for elasticity are familiar to IT managers. The tight budgets that have prevailed for several years pared down IT staffs and increased the demand for less-expensive alternatives such as contract help and offshoring. Meanwhile, day-to-day business operations and IT have grown so tightly intertwined that they must be treated as one and the same.

"What I'm hearing from hiring managers is, 'We want options,'" says Katherine Spencer Lee, an executive director at Robert Half Technology. She says that CIOs and IT managers who come to the staffing firm, a division of Menlo Park, Calif.-based Robert Half International Inc., seek to maintain a bedrock staff of full-timers, contractors who can "flex strategically" from project to project and an offshore outsourcing company for a small number of commodity projects.

There are many ways to meet the need for flexibil-

RED ROSE STUDIO

MANAGEMENT

The Keepers

One aspect of elasticity is knowing which IT functions you can outsource and which to keep in-house. According to analyst Marc Cecere at Forrester Research Inc., these are the strategic staff functions you can't afford to lose:

1 PROJECT MANAGEMENT: Even for outsourced projects, project managers provide oversight, rein in scope creep and serve as a consistent contact for IT customers.

2 ARCHITECTURE: In-house, architects set standards. For outsourced functions, they oversee decisions and technology direction and resolve disputes.

3 PLANNING: Planners align IT with the business, set technology direction and prioritize investments.

4 VENDOR MANAGEMENT: It's essential to have someone who can track and manage contracts – including outsourcing contracts.

5 SECURITY POLICY: You need in-house employees who can define policies regarding access to resources. (But you can outsource administration and maintenance of security.)

6 BUSINESS ANALYSIS: Business analysts formally manage the relationship between IT and the business and maintain continuity.

7 PROJECT OWNERSHIP: Only someone with specific business knowledge and personal commitment can ride herd on projects.

– Kathleen Melymuka

ity in staffing. Harrah's Entertainment Inc., for example, created a sort of IT SWAT team that rotates quickly from project to project, depending on what the Las Vegas-based gambling and entertainment company needs to accomplish.

In a 2002 reorganization, Harrah's divided its IT organization into groups devoted to application development, operations and support. A fourth group — the "solutions management group" — serves as a liaison between IT and business. This setup made IT more nimble and responsive to user and line-of-business needs, says Heath Daughtrey, Harrah's vice president of IT services. However, he adds, "we realized a key component was missing: flexibility. We needed the ability to scale [various IT groups] depending on business and markets."

In response, Harrah's pulled 30 full-time programmer/analysts from the four groups and created a flexible pool devoted to what the company calls "rapid-cycle rotation" — intensive, high-priority projects that last no more than six months. According to Daughtrey, the team has been successful as a "rapid resource delivery model," allowing Harrah's other four IT groups "to operate as lean as they can."

The program hasn't been without speed bumps, though. "We've seen over time that there are individuals who don't necessarily thrive in a fluid environment," Daughtrey says. Partly as a result, the original team of 30 has been pared to about half that number.

Bruce Goodman, CIO and chief services officer at Humana Inc., is a noted proponent of elasticity in IT. Humana's efforts to make its technology staff more flexible were born of near desperation, Goodman jokes. "A few years back, we overhauled IT so we could better support the business," he says, "and once we got [business] people all excited about technology, it occurred to us that it'd be nice to be able to deliver what we'd promised."

Before the IT makeover, the Louisville, Ky.-based health benefits company spent 30% of its resources, including workers' time, on application development and 70% on maintenance. That ratio has since been reversed and then some: Goodman says 80% of resources now go to development and only 20% to maintenance.

Humana's rallying cry became "Partner before buy; buy before build," he says, and this motto applied not only to applications but also to human resources. For starters, the company began moving mainframe legacy operations and maintenance to an outsourcing firm in India.

To create a particularly strategic application — which it hopes to not only use in-house but also sell to other health care companies — Humana turned to Electronic Data Systems Corp., because that firm had consultants whose specialized skills were key but won't be needed once the development is complete.

Robert Half's Lee says this approach makes sense. "When a company needs specific expertise that they lack on staff, they'll bring in contractors for six to 18 months just to get that project done," she says. "We see that a lot with things like SAP upgrades that are challenging and demand hard-to-find skills but aren't 'forever' projects. Contractors give you that elasticity."

What's New?

But outsourcing to India and working with EDS aren't exactly revolutionary practices. What is it that separates a truly flexible or "elastic" IT group from those that just outsource or hire systems integrators?

Goodman says the difference is that elasticity demands a sweeping, big-picture approach to the entire range of IT tasks, projects and services. Elasticity assumes that "you look across the board," he says. "You're managing a portfolio of projects and finding the correct cost-effective approach to each one, all within typical [budgetary and service delivery] constraints." Goodman is describing IT portfolio management — a practice lifted from the financial investment arena —

which involves managing the suite of corporate IT projects as if it were a financial portfolio, balancing riskier projects with safer ones and monitoring the portfolio to ensure an acceptable risk/reward ratio.

It's clear that while its components, such as offshoring or hiring temps or contractors, tend to be tactical and reactive, true elasticity is strategic and anticipatory.

The People Part

If strategic thinking is one pillar of IT elasticity, the other is true commitment to the backbone of the organization: full-time employees. "If I were a CIO wanting more elasticity, I'd look carefully at employee development programs," says Rick Poppell, an analyst at People[3] Inc., a Gartner Inc. research firm in Bridgewater, N.J. He says the best elastic IT groups are broadening staffers' skills to move them from back-end processes, such as coding and maintenance, to front-end roles, which include project management and business analysis — high-visibility, high-value jobs that reflect the symbiotic relationship between technology and business.

That has been the model at Harrah's, where solutions management group participants develop a broader-than-usual range of skills, according to Daughtrey. "Rather than predominantly supporting one [proprietary application] such as casino management, they work on a variety of projects: e-business, lodging, casino, etc.," he says.

> You're managing a portfolio of projects and finding the correct, cost-effective approach to each one.
>
> **BRUCE GOODMAN, CIO, HUMANA INC.**

Humana also keeps a close eye on IT staffers' career paths. "Despite our partnerships and outsourcing, we make it clear we have plenty of career opportunities [for full-timers]," Goodman says. He believes the key to retention is to offer employees challenging, high-value-add development assignments in hot areas such as data mining, wireless and Humana's intranet.

Tim Ramsay agrees. An associate vice president at the University of Miami in Coral Gables, Fla., he advocates elastic IT staffing, which he says is relatively easy in a university environment, where undergrads eagerly tackle thankless jobs. "The core IT staff is happy to let students do some of the tedious stuff, leaving them more challenging work," he says.

In the end, Poppell says, truly elastic IT organizations are easy to distinguish from those that are merely plugging holes. "The companies that are doing better understand the business drivers behind IT," he says. They have a formal IT plan supported by an infrastructure plan that looks ahead three years. This, he says, allows businesses to create a "formal IT workforce plan that asks, 'Do we have the capability to complete our various projects?' "

If your IT group lacks such strategic planning, you're probably not yet really elastic. That means you're most likely paying a premium for skills you could have developed in-house, and the only things stretching are your budget and your employees' patience. ● 48894

Ulfelder is a Computerworld *contributing writer in Southboro, Mass. Contact him at sulfelder@charter.net.*

BARBARA GOMOLSKI

Budget 2005: Win Some; Lose Some

BUDGETING IS AN EXERCISE that many IT managers dread. Because IT has an unpredictable economic model, budgeting accurately can be difficult. After several years of cost cutting, *modest* IT budget growth returned in 2004 and is expected to continue into 2005. But the pressure to reduce IT costs is not going away.

Here's a look at the major areas of IT spending and my predictions for how these categories will be treated in 2005 IT budgets.

Hardware costs, which typically represent about 20% of the IT budget, include depreciation on hardware assets, leases, expensed hardware purchases and maintenance contracts. Although unit costs of hardware have dropped in recent years, hardware expense as a percentage of total IT budget will remain static. This is because companies are buying more hardware than they did in the past, largely as a result of increased data storage requirements. In 2005, many organizations will make hardware purchases that had been postponed during the recession. Consequently, despite the drop in unit costs, I expect that most organizations will budget about the same for hardware as they did in 2004.

Software costs have increased from 9% of the IT budget in 1998 to about 20% today. The upward trend in software spending won't continue, however. Companies are buying fewer licenses and dropping nice-to-have but unessential support agreements. Also, software vendors have become a bit more flexible on pricing. Purchasing models, such as application hosting, are allowing companies to reduce the acquisition and ongoing costs of software. As a result of these factors, I believe that most companies won't increase their 2005 investments in software.

IT staff costs, which include the cost of internal employees as well as contractors, have declined during the past few years. There are several reasons for this. First, the wide availability of IT labor has meant fewer bonuses and raises for IT professionals. Simply put, it's still a buyer's market when it comes to IT skills. Second, many organizations reduced the number of contractors they use in order to cut costs during the recession. Third, increased reliance on outsourcers has resulted in smaller staff budgets for many companies.

In 2005, I expect IT organizations to budget only marginally more for internal staff and contractors. IT hiring has picked up only slightly. Even if demand for IT talent increases in the coming months, companies will stay cautious about expanding head count.

Telecommunications costs, which include voice and data, are often seen as the low-hanging fruit for organizations that must reduce their IT budgets. It's true that most organizations can save money by auditing telecommunications bills and instituting better contract management procedures. For example, one way to save money is to bring together all telecommunications contracts with the same provider under a single overall contract for total spending recognition and more efficient administration.

Telecommunications costs have gone down slightly in the past few years, and I expect that trend to continue. Tight competition in the telecommunications marketplace and a growing interest in voice over IP will enable firms to continue to drive these costs down.

There is one exception worth mentioning: wireless. In many organizations, wireless is still a rogue expense that isn't centrally managed. As a result, corporate costs for wireless are often disproportionately high in comparison with those for fixed-line services. Over time, more organizations will centralize wireless services under the IT budget, however, and IT managers can expect to "inherit" the wireless problem, if they haven't already.

External service providers include all nonstaff IT labor, except contractors. There has been a lot of industry hype about outsourcing, particularly offshore outsourcing, but hype aside, dependence on external service providers is growing. As a result, I expect most IT organizations to spend more on them in 2005 than they did in 2004. In particular, there appears to be growing interest in application development and integration services.

The pressure to reduce IT costs is not going away. Even as they allocate slightly more money for hardware purchases and external service providers, organizations are looking for ways to reduce "baseline" or ongoing IT costs. ● 49158

BARBARA GOMOLSKI, a former *Computerworld* reporter, is a vice president at Gartner Inc., where she focuses on IT financial management. Contact her at barbgomolski@yahoo.com.

WANT OUR OPINION?

For more columns and links to our archives, go to www.computerworld.com/opinions

Bridging the Data Divide

The adversarial relationship between auto-makers and new-car dealerships creates a reluctance to share information. CRM software for this market was designed with this unusual sales channel in mind. **PAGE 34**

Turning Data Into Dollars

Retailers are using call center and data-gathering CRM software to manage millions of customer relationships and make more sales. **PAGE 36**

Personalize Your Job

CRM and personalization applications are becoming so simple that marketers don't need much help from IT. That makes columnist Mark Hall wonder, What can you do to save your job? **PAGE 42**
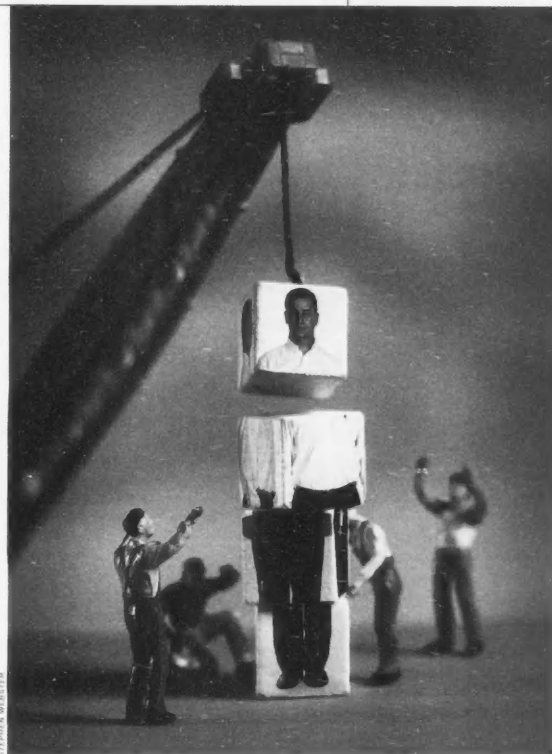
CRM Goes Vertical

SPECIAL REPORT We profile seven industries and their different CRM needs.

EDITOR'S NOTE

WELCOME to the "verticalization" of customer relationship management. Some CRM vendors offer as many as 20 different versions of their products, each geared to a different industry. Plus there are niche software vendors in various sectors, as well as systems integrators that are willing to do as much industry-specific tailoring as you can afford.

Is this a good thing? Mostly. It's certainly true that CRM for manufacturing is dramatically different from CRM for financial services or health care. The big advantage of an industry-specific CRM package is that it saves companies from that first layer of customization and provides functionality that the business can recognize and use immediately. The ROI should come a bit sooner, too.

Companies will still need to tweak even these vertical CRM packages to match their actual business. "No CRM on the planet doesn't need customization," says Kathleen Kennedy, vice president of customer development at Office Depot.

This special report examines the unique CRM needs of seven key industries. But a few words of warning: Beware of vendors that slap some industry lingo on the software labels and database fields without addressing the underlying industry processes. And don't be seduced into thinking that a vertical CRM package is a panacea right out of the box. CRM is mostly a nontechnology issue, requiring a clear business strategy, user buy-in and a level of maturity that many companies just don't have. That's why so many are on their second or third attempts to get CRM right. **⊙ 48996**

Mitch Betts is Computerworld's executive editor. Contact him at mitch_betts@computerworld.com.

KNOWLEDGE CENTERS ONLINE

For news and information resources, visit our CRM Knowledge Center.

QuickLink k1300
www.computerworld.com

Bridging the Data Divide

Automotive CRM helps break down walls between manufacturers and dealers. By Steve Ulfelder

NTRODUCED IN 2003, Honda's so-ugly-it's-almost-cute Element was intended to attract young, hip consumers. In its first full year of production, the Element found more than 67,400 buyers, exceeding expectations. But alas, the SUV has gone over like a lead surfboard with the coveted Gen Y crowd; R.L. Polk & Co. shows that buyers are more likely to have attended Woodstock than the X Games.

That Honda Motor Co. could whiff so badly in such an important market segment proves that automotive industry CRM has miles to go.

One reason is that automakers don't own their most important customer-contact points — new-car dealerships. Indeed, the relationship between automakers and dealerships is frequently adversarial. This unusual sales channel has strongly influenced the design of CRM software for the industry.

"In your business rules and data structure, you need to pay a great deal of attention to hierarchies and visibility rules," says Patrik Riese, director of CRM at Saab Cars USA Inc. That's because while dealerships are happy to accept leads and prospect information that parent company Saab (a division of General Motors Corp.) takes in through its Web site and other media, they are notoriously reluctant to share any information they glean themselves.

Tight-Lipped

"When I worked [in CRM at] Nissan, anytime we talked with a dealer about CRM, they would simply shut down if there was to be a sharing of information with the manufacturer," says Douglas Turk, who is now an analyst at consultancy Inforte Corp. and co-author of the book *CRM Unplugged* (Wiley, 2004).

Riese says this odd one-way information flow is now designed into the Siebel Systems Inc. CRM automotive software that Saab uses. However, in 2000, when the carmaker first used the Siebel application, he says, "we were one of the first automotive customers and had to do a lot of customization."

Like Siebel, SAP AG offers CRM tools tailored for the industry. The automotive version of MySAP CRM lets manufacturers track both customers and vehicles throughout their life cycles. It includes tools for online configuration and pricing, automatic warranty processing, and vehicle financing.

Another fact of automotive industry life that CRM vendors must pay attention to is ease of use. The turnover rate among dealership salespeople can be as high as 150% annually, so systems must be easy to learn. Moreover, many dealers are technology-averse mom-and-pop stores in which even the Rolodex is deemed newfangled.

"Only 10%, maybe 20% of all dealerships 'get' technology," says Shaun Knissin, director of Internet sales at Byers Automotive in Columbus, Ohio.

A Template for Every Task

The easily strained relationship between manufacturers and dealerships has given rise to another niche — CRM specifically tailored for dealers. The leader here is The Reynolds and Reynolds Co. in Dayton, Ohio. According to Turk, where general enterprise CRM tends to be focused on "the funnel" — the process by which a contact becomes a prospect and possibly a customer — software from Reynolds and Reynolds is more likely to stress postsales information intended to attract lucrative service business. For

example, Reynolds and Reynolds' library of follow-up letters includes a mind-boggling 3,322 templates.

The vendor also offers a feature that allows dealers to quickly calculate a half-dozen or more payment options. Traditionally, sales reps have time to run only one or two possible payment plans for prospects, fearing that customers may grow antsy if they take any more time. Byers Automotive is a Reynolds and Reynolds customer, and Knissin says the payment-options feature improved the dealership's percentage of closed sales.

There are other CRM benefits awaiting manufacturers and dealers alike, experts say. "The big concern in the industry is to get away from incentives," says Turk. Studies show that consumers have grown so accustomed to rebates, financing deals and other incentives that they won't shop for most brands unless such ticklers are offered. "That tends to mean they're not sure who their real consumers are," Turk adds. "Now they need to grasp their competitive differentiation."

On the dealership side, Knissin says the big benefit lies simply in treating consumers the way they're treated by other retailers. "When you come in, I know what you've bought from us, when you need service, when you might be considering your next purchase — it's basic stuff, but so many dealers don't know this." ● 48880

Ulfelder is a Computerworld contributing writer. Contact him at sulfelder@charter.net.

Automotive

CRM MATURITY LEVEL: Medium
Maturity rating by Barton Goldenberg, ISM Inc., Bethesda, Md.

ROI GRADE: C
Grade based on positive ROI in case studies analyzed by Nucleus Research Inc., Wellesley, Mass.

SPECIAL CHARACTERISTICS:
Carmakers have focused on key profit centers such as service and warranties, but they haven't spent a lot of time targeting consumer awareness. Automotive industry CRM software places more emphasis on postsale follow-up, which improves repeat business and service visits. Visibility and data-protection features allow dealerships to shield prospect and customer information.

KEY VENDORS: PeopleSoft Inc., Reynolds and Reynolds, SAP, Siebel

Magazine Of the Year.

COMPUTERWORLD HAS BEEN NAMED MAGAZINE OF THE YEAR FOR 2004.

Every year the prestigious American Society of Business Publication Editors (ASBPE) selects one publication with 80,000 or more subscribers to receive this top honor. The award can go to any business publication in any industry category, and we won! We are proud that our ongoing commitment to editorial integrity, audience focus and in-depth coverage has been recognized by this auspicious award.

ASBPE
MAGAZINE OF THE YEAR
2004

COMPUTERWORLD
THE VOICE OF IT MANAGEMENT)))

Turning Data Into Dollars

Retail CRM finds the payoff in reams of consumer data.
By Stacy Collett

A CUSTOMER AT electronics store Best Buy might not recall purchasing Shania Twain's hit CD *Come on Over* back in 1997, but the $25 billion retailer certainly does.

In fact, since 1996, Richfield, Minn.-based Best Buy Co. has been collecting data on nearly every transaction made, rain check issued and call center problem resolved for 75 million customers. Now, with a robust, homegrown database of customer information, Best Buy's next challenge is to leverage the data into competitive advantage.

That's the challenge facing most large retailers today, according to industry analysts. The retail sector, unlike other industries, is managing relationships with millions of consumers, compared with perhaps dozens of clients in business-to-business sectors.

Most retailers have implemented call center and data-gathering CRM software and are beginning to wade into analytics and customer segmentation, which may someday channel special offers and incentives to individuals based on their buying habits.

"Retailers are trying to get to where they were in 1903," explains Cathy Hotka, principal at retail consulting firm Cathy Hotka & Associates in Washington. "In 1903, the person who runs the store knows the customers, can put things on credit, knows what will sell and when, and knows what not to buy. When they went to mass markets, that granularity was lost. Regaining that intimacy with the audience is very difficult."

A Quantum Leap

The process of moving from quarterly business intelligence reports to real-time customer segmentation is difficult because large retailers are collecting highly complex and granular information on their customers that can vary greatly from business to business. That requires customized applications, even when using specialized retail CRM packages.

When Best Buy began building its CRM capability in 1998, packaged applications weren't an option. "We needed to customize the core capability ourselves. Nobody knew the customer data as well as we did," explains Tim Anglum, Best Buy's director of CRM from 1998 to April 2004.

At Office Depot Inc., customers range from household buyers to large corporations through its stores and $3 billion online delivery business. Its CRM database holds records on a half-billion transactions conducted each year. The Delray Beach, Fla.-based office supplier installed software from Teradata in 1999 for its scalability, but it still required customization.

"No CRM on the planet doesn't need customization," says Kathleen Kennedy, vice president of customer development at Office Depot. But the core database technology of Teradata, a division of NCR Corp. in Dayton, Ohio, fit the bill. Today, Kennedy's team is developing a customer-centric data warehouse that will allow the retailer to automatically trigger marketing offers to individuals based on buying patterns.

"That will be one of the key competitive advantages in 2006 — to move quickly and respond quickly to customers," Kennedy adds.

Though marketing to individuals is years away, retailers are closer to putting customers into several general categories. "Chances are good they'll dump you into a hopper of people like you — male, female, age, neighborhood," Hotka says.

Retailers RadioShack Corp. and Toys R Us Inc. have been stocking their databases with customer information for years, she says, but "they weren't doing anything with it. They're trying to get some glimmers of insight into customer behavior. But

Retail

CRM MATURITY LEVEL: High

Maturity rating by Barton Goldenberg, ISM Inc.

ROI GRADE: C

Grade based on positive ROI in case studies analyzed by Nucleus Research Inc.

SPECIAL CHARACTERISTICS: With thousands, sometimes millions, of customers, retailers need scalable software to handle data with granular detail. In the future, the retail industry hopes to leverage specialized marketing and incentives based on customer buying habits. For now, retailers are using multichannel functionality, campaign management, segmentation and customer analytics capabilities.

KEY VENDORS: Blue Martini Software, Business Objects, Cognos, E.piphany, Hyperion Solutions, SAS Institute, Siebel Systems, Teradata, Unica

MARKET WATCH: Worldwide CRM license revenue is predicted to grow from $59M in 2003 to $146M by 2008. Gartner Dataquest, March 2004

it still doesn't have a thing to do with individuals."

Though the number of packaged applications is at an all-time high, that doesn't mean monster-size mainframes are going away. Instead, IT departments are tying in new databases and plugging in campaign management systems, e-mail marketing capabilities and analytical software that wasn't available before.

For business intelligence applications, for instance, retailers most often look at software from Cognos Inc., Hyperion Solutions Corp., SAS Institute Inc. and Business Objects SA, according to Robert Garf, an analyst at AMR Research Inc. in Boston.

For real-time, segmentation and "customer clustering" software, which offers advanced analytics, retailers are looking at Unica Corp., SAS, Teradata, E.piphany Inc., Blue Martini Software Inc. and Siebel Systems Inc., which recently purchased nQuire Software Inc., a maker of Internet-based business analytics software.

"The important piece is you might use separate software to do this but feed that info into operational systems, like the loyalty system, point-of-sale and marketing systems," Garf notes.

Future Capabilities

What CRM capabilities are in retailers' immediate future? "Anything that looks like optimization," Hotka says. "The use of statistics and algorithms to glean information from data on who might buy a given product. They'll use it to determine how to merchandise and price a new item, or how far to mark down an item that won't sell. They're finally getting to a point where they'll know to mark down

slow sellers by 50%, not just 25%."

But although IT budgets have increased in the retail sector this year and interest in CRM is high, most retailers won't jump on new CRM applications quickly, predicts Adam Sarner, an analyst at Gartner Inc. "They're

very cheap, and sometimes you're talking about razor-thin margins," he says.

But retailers should also be looking over their shoulders.

"Do very profitable and innovative retailers wait? No. They have gone crazy on tech spending because

they've seen return. They get it," says Hotka. "You don't want to assume your competitor is waiting to enhance CRM capabilities." ◯ 48916

Collett is a freelance writer in Chicago. Contact her at stcollett@aol.com.

Creating Brand Awareness
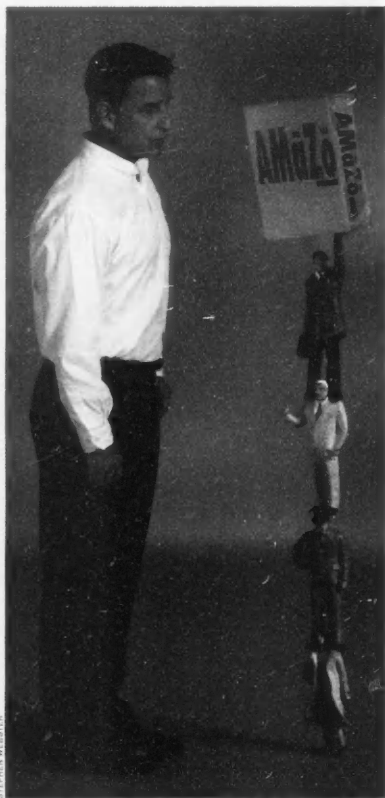
Consumer goods CRM tests campaign effectiveness. By Marc L. Songini

CONSUMER GOODS manufacturers face unique challenges when rolling out CRM applications, compared with other industries such as insurance or finance.

For one thing, they don't typically focus on supporting call centers or remote sales force automation processes, but rather on building better marketing and sales campaigns. And they generally don't have direct contact with the end consumer, but rather deal exclusively with a middleman retailer or product distributor.

This complex sales process means consumer goods manufacturers tend to focus on product branding rather than on direct sales. As a result, one of the industry's biggest problems is getting advanced analytical CRM tools that can decipher just how well each branding campaign is working at each outlet.

CRM products for trade promotion and rudimentary customer analysis have been around for years, says Doug Turk, an analyst at Inforte Corp., a high-tech consultancy in Chicago. But now, he says, the major CRM vendors, such as SAP AG and San Mateo, Calif.-based Siebel Systems Inc., are starting to sell specific CRM add-ons for consumer goods manufacturers to help set prices for marketing campaigns and brand management, for example.

Who's Buying What

H.J. Heinz Co. wants to analyze its product promotions in greater detail using a more systematic approach, says George Chappelle, CIO at the Pittsburgh-based food products maker. The company's sales, finance and marketing specialists already use Siebel 7.5 to run trade promotion campaigns. The analytical module in the suite takes feeds from ERP and supply chain applications, allowing users to slice and dice the returns and expenses.

Soon, Heinz would like to break down each marketing campaign to determine profitability by each retail customer. Toward that end, Heinz last year launched a project to help it more precisely allocate, measure and account for all money spent during a campaign.

Chappelle says the upgrade will create tighter integration between the supply chain management system and Siebel applications that will enable the exchange of relevant forecasting information and deliver improved service and inventory management.

The upgraded system will also integrate various pieces of customer-related data to determine profitability, factoring in variables such as discounts, says Chappelle.

Besides the lack of advanced analytical capabilities, there are cultural problems that can prevent a smooth flow of CRM information back and forth through the supply chain. Manufacturers have to rely on the retailers to collect, record and send them the sales data, something the latter aren't always willing to do, according to Jim Prevo, CIO at Waterbury, Vt.-based Green Mountain Coffee Roasters Inc.

If retailers and suppliers shared more data, they could better determine the right mix of products in the sales channel. However, supermarket chains often either don't bother to gather pertinent sales data or are reluctant to share such information with manufacturers, preferring to sell it to independent research firms.

Green Mountain Coffee Roasters runs PeopleSoft CRM software to handle its monthly e-mail campaigns. The system sends the company's retail customers messages that have been tailored to their specific profiles based on records of previous buying habits, says Prevo. All customer data, including ordering history and other supply chain information, is consolidated in a central database to create an individual profile and then used to power the marketing application.

Access to Common Questions

The situation is different at camera and digital equipment maker Nikon Inc. in Melville, N.Y., which uses a hosted service center application from RightNow Technologies Inc., a CRM vendor in Bozeman, Mont. The application, called E-Service Center, lets both end customers and dealers access the most commonly asked technical questions, according to David Dentry, general manager of technical support at Nikon.

The software tracks inbound service calls and e-mail and offers customers a searchable database to help locate relevant information. Nikon personnel can see which customers are accessing the site, as well as the sorts of information they are viewing, and they can run reports to determine if a given technical article needs to be supplemented or replaced.

Nikon is rolling out the system globally, which will allow, for example, a European technical manager to take content from the U.S. site and immediately duplicate it on his own local site. It has become fairly common for high-tech electronics manufacturers to use CRM software to handle customer support, notes Dentry.

CRM is a key tool.

"I think the foundation of competition is understanding your customers and making purposeful contact with them," says Prevo. "Any tools that help companies accomplish those two objectives are going improve competitiveness." ○ 48588

Consumer Goods Manufacturing

CRM MATURITY LEVEL: Medium

Maturity rating by Barton Goldenberg, ISM Inc.

ROI GRADE: B

Grade based on positive ROI in case studies analyzed by Nucleus Research Inc.

SPECIAL CHARACTERISTICS: Consumer goods manufacturers don't sell to the end user, so they have to influence the retailers to carry their products, and the consumers to request them. It's all about branding and consumer marketing. Industry-focused CRM offers complete consumer response capabilities, key account management, brand management, trade management and retail account management.

KEY VENDORS: PeopleSoft, RightNow Technologies, SAP, Siebel Systems

MARKET WATCH: Worldwide CRM license revenue is predicted to grow from $527M in 2003 to $543M by 2008.

Gartner Dataquest, March 2004

ROBERT JOYCE understands complex relationships. A former salesman and now managing director of corporate relationship management at The Bank of New York Co., Joyce completed a CRM deployment in March that gives the firm's 1,650 sales employees in 30 countries a single, consolidated view of each customer's interactions with the bank.

This all-encompassing view is typical of a new trend designed to counteract the effects of two decades of massive consolidation in the financial services industry. A wave of mergers and acquisitions fragmented and compartmentalized customer information, making it difficult to know what each business unit was doing or to track customer interactions.

In the relationship-driven business of financial services, that spells trouble. A narrow view of the client makes interaction impersonal, and when a salesperson doesn't know a customer's buying habits, it's far more difficult to pitch new products that speak to the customer's needs.

Full Customer View

When it comes to CRM software, financial services, unlike manufacturing or retail sales, is a completely information-based industry, according to Mindy Propper, an analyst at McLean, Va.-based BearingPoint Inc. Buying preferences, family needs and retirement plans are among the many bits of information that must be meticulously tracked so financial services firms can tailor products to individual needs.

But despite huge investments in CRM, very few resources have been focused on enhancing the customer experience, according to a recent survey of financial institutions by BearingPoint. In fact, 42% of the 174 companies surveyed still interact with their customers within product silos.

Propper says much of the customer disconnect is the result of developing CRM projects from the inside out and not the outside in — in other words, disregarding what the customer might want in favor of what the business wants.

That was what Bank of New York, a $6.3 billion company, was attempting to overcome with its $10 million CRM project. Over the past decade, the bank has made more than 80 acquisitions, which have resulted in almost as many new product lines, Joyce says.

Bank of New York had 10 sales-tracking systems, the majority of which consisted of rudimentary tools, such as handwritten address books, Lotus Notes programs or Excel spreadsheets.

"We ended up with a slew of disparate sales forces throughout the globe in different product areas. We didn't have one place where we could look to see what we were doing with a client or what the opportunities were with a particular client," Joyce says.

The Bank of New York chose Siebel Systems Inc.'s eFinance software to tie that customer information together. Joyce says the project was a success because he spent an "inordinate" amount of time getting user buy-in. Yet there was still resistance from sales and business managers, who didn't want to give up their customer data or switch to another system for tracking it.

"The important point on how we got around that issue was to use both the carrot and the stick," Joyce says. He also kept the project focused only on the sales force, with no call center or back-office administration tie-ins, in order to avoid scope creep.

Data Overload

Kathleen Khirallah, an analyst at TowerGroup in Needham, Mass., says the financial services industry is ahead of the curve in its use of CRM software, but it also faces far greater challenges than other industries in getting to a single view of the customer across the entire institution.

"I don't think they're providing lip service to the principles of CRM. I really do think banks understand working with customers well is critical to their success," Khirallah says. "It's kind of the blessing and the curse. They're good at it, but there's just so much that they have to coordinate, there are challenges along the way."

Smaller companies might have an internal culture that supports customer service, even without the software to automate those services. Larger financial services firms, however, have to use software to deal with far more information to give the illusion of a personal touch.

"Really large institutions that rely on software and have made those investments sometimes don't have that service culture. So they have other challenges," Khirallah says.

Robert Haggerty, an analyst at TowerGroup, says firms that perform best in financial services are ones that cultivate and manage relationships. Whether it's banking, brokerage, investment management or insurance services, it's critical to understand and retain information about customers, he says.

Haggerty says automation of data life-cycle management is the crucial next step, when customer representatives will be automatically alerted to events in the consumer's life. Once the salespeople have that initial information about a customer, he says, "they'll have a good excuse to call and get a sale out of it." ○ **48975**

Financial services CRM helps create a complete picture of customers. By Lucas Mearian

STEPHEN WEBSTER

Unifying Customer Views

Gaining Taxpayer Respect

Government CRM has a private-sector goal: customer satisfaction.

By Nancy Ferris

AFTER YEARS OF DISMISSING CRM as a poor fit for the public sector, many government agencies are now enthusiastically embracing the technology.

In fact, some analysts say the government sector is the hottest growth market for CRM. Barton Goldenberg, president of ISM Inc., a consultancy in Bethesda, Md., says he expects government spending on CRM software will grow 30% in 2004, reaching up to $2 billion in sales.

The government, of course, doesn't sell many products or services, and most agencies aren't using CRM to increase revenue. But Goldenberg says several of the other reasons for businesses to use CRM also apply in the public sector: cost reduction, product and service improvement, better customer knowledge

and higher employee morale, to name a few. To achieve these benefits, agencies are often using conventional software, call centers and the kinds of online services offered by major retailers. Even though government agencies aren't driven by profit, they do want to serve the public better and become more efficient. In this sector, CRM is closely related to "e-government" — using technology like online services to make it easier for taxpayers to get services.

On the Internal Revenue Service Web site, for example, professional tax preparers can see customers' IRS accounts, file returns and resolve tax problems. Corporations can also file. Because of security and privacy concerns, the agency isn't ready to give taxpayers the same kinds of access. But more than 25,000 tax professionals are using IRS "e-services," says Richard Skorny, the agency's deputy associate CIO for program management.

One Stop for Answers

State and local governments are also jumping on the CRM bandwagon. The Dade County, Fla., government is working with the city of Miami to install a joint call center that will handle all nonemergency service requests beginning in November. Residents will be able to dial 311 whether they want to apply for a business permit or report an abandoned car, a stray cat or a pothole. The center won't merely answer questions; it will fill out work orders for city and county employees, dispatching a building inspector or dogcatcher as needed.

The Miami-Dade 311 Answer Center will be the nation's first to handle calls for both a city and a county, says June Randall, assistant director of the county's enterprise technology services department. Project leaders hope that many of the nearly three-dozen municipalities in Dade County will join.

CRM can also improve coordination among federal agencies, where people don't know whom to call about passports (the State Department), student loans (the Department of Education) or food poisoning (the Food and Drug Administration). If a citizen calls the wrong agency, it can take many more calls and transfers to find the right one. "They often get on that carousel of being shunted around" from office to office, says Theresa Nasif, director of the Federal Citizen Information Center, an office of the General Services Administration.

Nasif's office operates the federal government's central Web site, www.firstgov.gov, and the 1-800-FEDINFO call center. Together they will receive more than 230 million customer contacts this year. Nasif also heads a program called USA Services

that seeks to improve responses to citizens across all the agencies. "It's an obligation of the government to serve citizens in this manner," she says. "It increases citizens' confidence in their government."

The Miami-Dade Answer Center uses Motorola Inc.'s Customer Service Request system, which is CRM software for the public sector. Motorola's expertise began with 911 emergency call centers and dispatch systems. In many government CRM projects, the vendors are mainstream CRM suppliers. The IRS, for example, uses PeopleSoft CRM for Government.

Todd Sickles, a partner in the federal practice of consulting firm Accenture Ltd. in Reston, Va., says call centers are nothing new for government, but in many cases the call centers are silos that are poorly integrated with the agencies' other business processes.

ISM's Goldenberg says that many government organizations are reluctant to measure service delivery and track customer interactions because of the public sector's prevailing risk-averse culture, where a relatively minor dip in customer satisfaction can be grist for a heated congressional hearing.

Better Citizen Service

One government that's using CRM as a performance improvement tool is the city of Baltimore, which uses its 311 call center as one source of information for its award-winning CitiStat program. Mayor Martin O'Malley uses complaint rates and many other pieces of data to rigorously track the performance of city departments. Matt Gallagher, CitiStat's director, says Baltimore gets 1 million calls a year from residents. Many of them go to a 311 call center running Motorola's software.

Another difference between public- and private-sector CRM programs stems from citizens' concerns about the government intruding on their lives. For example, federal agencies are generally forbidden to track the online activities of individual visitors to their Web sites. However, Accenture's Sickles says privacy safeguards need not be a show-stopper.

The return on investment is measured differently because CRM is likely to have only an indirect effect on government revenue, if it has any effect at all. But the IRS modernization program is based on the notion that efficient, effective tax collection may help the bottom line.

Goldenberg suggests that taxpayers who have had a good experience in their interactions with the government may be more willing to pay taxes and fees for the services government provides. ◆ **48976**

Ferris is a freelance writer in Chevy Chase, Md. Contact her at ferrisn@att.net.

Government

CRM MATURITY LEVEL: Low
Maturity rating by Barton Goldenberg, ISM Inc.

ROI GRADE: D
Grade based on positive ROI in case studies analyzed by Nucleus Research Inc.

SPECIAL CHARACTERISTICS: CRM's integration challenges are many – stovepiped systems and agencies, security and privacy concerns, and the prevalence of older mainframe-based systems. But agencies are embracing CRM, particularly conventional software for call centers and online services, in an effort to increase citizen satisfaction.

KEY VENDORS: Motorola Inc., Oracle Corp., PeopleSoft Inc., SAP AG, Siebel Systems Inc.

MARKET WATCH: Worldwide CRM license revenue for national and international governments is predicted to grow from $52 million in 2003 to $76 million in 2008. For local governments, CRM revenue is predicted to grow from $47 million to $86 million in the same period.
Gartner Dataquest, March 2004

Preventing a Data Overdose

Pharmaceuticals CRM manages multiple types of customers and regulations.
By Alan R. Earls

ASK BORIS MEYERSON, senior director of information at Bradley Pharmaceuticals Inc., about CRM, and you'll get an earful. He'll tell you about the Electronic Records and Signatures Act, the Prescription Drug Marketing Act and some of the other federal regulations and industry best practices with which his company must comply.

But like every other business, the Malvern, Pa.-based provider of prescription dermatology products must also make a profit. Meyerson says his firm selected software from StayinFront Inc. that's tailored to the pharmaceutical industry, because in addition to the complexity of regulations, "in the pharma industry, we have three layers of customers," which necessitates a special style of CRM.

In order for a CRM system to work, it must combine input about drug sales from pharmacies with similar data from insurers and hospitals and then map that against advertising efforts and promotional activities with specific physicians, says Meyerson.

Judy Hanover, an analyst at Life Science Insights in Framingham, Mass., says CRM is different in this industry because of the nature of sales and the regulatory requirements.

"In pharmaceuticals, representatives do not write orders; they work with physicians to provide information about their products, referred to as detailing," she says.

"They also may collect and report information about adverse events and/or reimbursement issues, which are often handled by special call centers configured to collect and assist in these transactions," says Hanover.

Pharmaceuticals

CRM MATURITY LEVEL: High
Maturity rating by Barton Goldenberg, ISM Inc.

ROI GRADE: A
Grade based on positive ROI in case studies analyzed by Nucleus Research Inc.

SPECIAL CHARACTERISTICS:
The industry requires a combined view of sales, marketing and advertising information from pharmacies and physicians, data about adverse events and reimbursement issues, and regulatory compliance data.

KEY VENDORS: Dendrite International Inc., SAP AG, Siebel Systems Inc., StayinFront

"Pharmaceutical companies have generally been early adopters of CRM," says Dale Hagemeyer, an analyst at Gartner Inc. "They are now mature users with wide adoption across the industry, sometimes in a second- or third-generation implementation." **✪ 48978**

Building Patient Loyalty

Health care CRM must address patients', hospitals' and insurers' needs. By Alan R. Earls

"WE DON'T DO CRM in the classic sense," explains John Zimmer, vice president of marketing at Toshiba America Medical Systems. Although the company's customer management system began as a sales force automation project, "we have moved well beyond what people mean by CRM," he says.

Toshiba America, which deals in diagnostic imaging systems for health care providers, uses a custom-built application based on Cognos Inc.'s business intelligence software to track a wide range of factors such as customer satisfaction indices, changes in perception about its products and long-term customer-retention data.

Zimmer's style of CRM may be unique, but the challenges he faces are not uncommon in health care: There is no standard way of doing CRM and no clear leader among the vendors.

Hospitals have been slow to adopt CRM, but experts say the need to contain costs, build loyalty among patients and provide better service has spurred hospitals to look at various aspects of CRM, including call center support and self-service functions.

But the health care industry operates under a heavy dosage of government and industry regulation, and CRM software is often customized to support those requirements, plus reimbursement processes and call centers. And the need to ensure patient privacy means that many of the data-sharing functions of CRM aren't acceptable.

Joanne Galimi, an analyst at Gartner Inc., says neither payer organizations nor health care providers have advanced far down the CRM path; both favor tactical, point solutions. For instance, Galimi says she sees organizations trying to automate sales cycles or improve customer service and support — especially through implementing Web-based customer self-service.

So while the large players still share a big part of the market, niche players are having a field day, Galimi says. "The payers, for example, tend to think the bigger software players are pricey. But that will change as these organizations mature and begin to reconsider the benefits of more of a suite-based approach to CRM," she says. **✪ 48977**

Health Care

CRM MATURITY LEVEL: Medium
Maturity rating by Barton Goldenberg, ISM Inc.

ROI GRADE: B
Grade based on positive ROI in case studies analyzed by Nucleus Research Inc.

SPECIAL CHARACTERISTICS: CRM software is often customized for the industry to support regulatory requirements, reimbursement processes and call centers. In this industry, the need to ensure patient privacy is critical.

KEY VENDORS: IBM, Oracle Corp., PeopleSoft Inc., SAP AG, Siebel Systems Inc.

MARKET WATCH: Worldwide CRM license revenue for the health care provider industry is predicted to grow from $112 million in 2003 to $150 million by 2008.
Gartner Dataquest, March 2004

Earls is a freelance writer in Franklin, Mass. Contact him at alanearls@ comcast.net.

SNAPSHOTS

CRM: Buy or Build?

If you've evaluated CRM technology, did you ultimately implement a CRM system?

- Yes, internal system 19%
- Yes, vendor package 55%
- No, didn't implement 26%
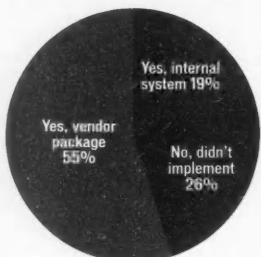
Base: 960 sales managers who evaluated CRM

CRM Headaches

What are the toughest challenges you've encountered in your CRM initiative?

1. Populating/maintaining data
2. Gaining user acceptance
3. Measuring project ROI
4. Matching technology to process
5. Customizing CRM tools
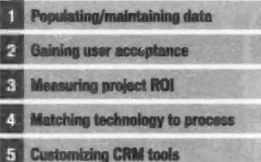
Base: 501 sales managers who implemented CRM

CRM's Impact

What results have your CRM implementation efforts generated to date?

- Achieving minor improvements 44.9%
- Achieving significant improvements 25.7%
- No measurable improvements 17.8%
- Don't know 11.6%

Base: 501 sales managers who implemented CRM

SOURCE FOR ALL: CSO INSIGHTS, BOULDER, COLO., JANUARY 2004

MARK HALL

Personalize Your Job

Career opportunities in corporate IT are under siege. What with threats from offshore outsourcers, infrastructure service providers, marketing departments. . . . Marketing? You bet. The same men and women who eschew pocket protectors and think client/server is where they itemize a tip to a waiter on an expense account after a customer lunch. Yep, they're after your job, especially if you've built your career on deploying CRM or personalization applications.

It's not that marketing folks are vicious, career-obsessed, money-hungry evildoers (well, OK, some of them are); it's just that an IT team's contribution to the value of how a company reaches customers and then maintains those relationships is diminishing. Technology isn't the problem, so you're not the solution.

Last month, I was chatting with Del Rose, director of global e-commerce at InterContinental Hotels Group, at the company's U.S. headquarters in Atlanta. He was telling me about the personalization technology underpinning Priority Club, the online service for frequent guests of IHG's 3,500 hotels worldwide. He explained that the overall system is complex. It uses a personalization engine from Art Technology Group (ATG) in Cambridge, Mass., and links it to 11 back-end systems to serve customers in six languages.

So, when IHG recently rolled out a service that permits a business traveler's assistant to access a Priority Club member's account to change travel plans, a whole new role had to be created, one with unique authentication rights and privileges. In effect, IHG had to create a personalized profile for a user who never traveled. What's more, the new account had to be flexible enough to suit the preferences of individual customers for how they want their assistants to access and use their private accounts, not for how IHG defines those rights.

Sounds like a daunting, time-consuming IT project, but that didn't turn out to be the case.

"What's most costly and time-consuming is thinking through the problem," Rose observes.

IHG's marketers figured out everything they wanted to do and then went to IT with the idea. They understood the complexity of the systems, but that didn't slow them down for a minute.

"The good news," says Rose, "is that technology is rarely the limiting factor."

Good news for whom? Not you. Not if you're hung up on the details of establishing solid connections between an Oracle database, a Siebel system and

ATG's personalization engine. That's been done hundreds, even thousands of times.

Certainly, it will need to be done again and again. But how important is that to your company? Scott Todaro, director of commerce and retail product marketing at ATG, argues that "IT will always be involved in a personalization project because of the back-end systems and will have some control mapping it out, but [the project] will be led by marketing or customer service."

You will no longer tell others what can be done; you will be told what will be done.

"Technology is not the hard part," says Rose. "The hard part is thinking through the requirements process."

In other words, if you're not involved in the requirements process, you may be relegated to becoming a simple order-taker. And that's not much of a career.

Luckily, that's not inevitable. Getting involved in requirements planning is simply a matter of volunteering. Yes, it means more meetings, but it's also a way to see how marketing thinks and to help shape your company's thought process.

Or you can help refine the requirements process. For example, IHG conducts extensive usability studies before implementing significant changes to customer-facing services on Priority Club. The company tests proposed updates to personalization features. IHG's IT team gets involved to ensure that customers have the best experience possible.

That's because this is where IT's hands-on technology skills can shine. You know what a system is capable of and how it can be leveraged to be more intuitive for users so the company can achieve its goals.

Let's face it, when the marketing department can call Salesforce.com and order instant CRM for hundreds, even thousands of users, the days of IT being the center of the automation universe are numbered. But the need for revenue-generating application requirements never ends. For that, you can be as effective as anyone in a suit. And maybe make one or two marketers nervous about their jobs. ○ 49277
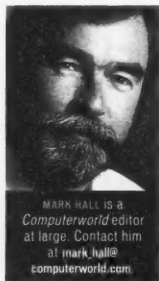
MARK HALL is a *Computerworld* editor at large. Contact him at mark_hall@computerworld.com

Transparency – the New Engine of Growth and Greatness

Critical reading for IT professionals and managers. Succeed by learning how the Internet and open IT architectures enable companies to become open enterprises – in turn competing and performing better.

Reaction from business leaders

"Don Tapscott and David Ticoll hit the bulls-eye with *The Naked Corporation*. The demand for openness and candor has never been greater. *The Naked Corporation* is a leadership toolkit for turning the relentless demand for transparency from threat to advantage."
— A.G. Lafley, Chairman, President and Chief Executive, Procter & Gamble

"They've done it again. Tapscott and Ticoll's capacity to combine a fresh and authentic perspective with real world data has once again opened the aperture on our emerging networked economy. A brilliant work."
— Dr. Eric Schmidt, Chairman and CEO, Google, Inc.

"A rare thing these days – a business book with a profound and important new idea. *The Naked Corporation* explains how a new force is changing the corporation and competitiveness. There are relevant, sometimes jarring insights in every chapter. And what a great read."
— Indra Nooyi, President and CFO of PepsiCo, Inc.

"Tapscott and Ticoll are ahead of the wave. The era of transparency and all its implications are about to crash down on corporations everywhere. *The Naked Corporation* is the first survival guide."
— Paul Taaffe, Chief Executive Officer, Hill & Knowlton

"A well-researched and timely book. The authors show how trust – powered by broad corporate transparency – isn't just about ethics, it is about success."
— John Chambers, President and CEO, Cisco Systems

"We need a corporate philosophy for the 21st century. Tapscott and Ticoll's book *The Naked Corporation* provides this – not only the rationale for a transparent corporation but also the principles of leadership in an open world."
— Klaus Schwab, Founder and President, World Economic Forum

The NAKED Corporation

How the Age of Transparency Will Revolutionize Business

DON TAPSCOTT and DAVID TICOLL
Authors of *DIGITAL CAPITAL*
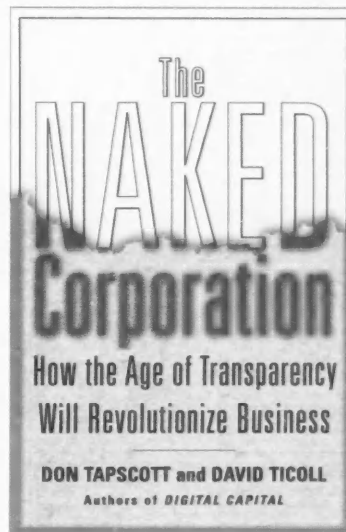
"*The Naked Corporation* argues, beautifully and persuasively, that there is no contradiction between good business and the values of honesty and openness. This book belongs in the briefcase of every right-thinking manager in the country."
—Malcolm Gladwell, author of *The Tipping Point*

Media Reaction

"This is a fresh and compelling thesis, backed up by some persuasive evidence."
– BusinessWeek

(This) "big idea coherently and most convincingly, combines an analysis of the recent crisis of corporate America with a celebration of the technological revolution…a wake up call."
– The Economist

"Tapscott and Ticoll produce compelling evidence that transparency is an inevitable social phenomenon and that such transparency is good."
– Fast Company

Join the discussion on harnessing transparency's power with Don Tapscott at www.AgeofTransparency.com

COMPUTERWORLD HEADQUARTERS

One Speen Street, P.O. Box 9171
Framingham, MA 01701-9171
Phone: (508) 879-0700
Fax: (508) 875-4394

PUBLISHER/CEO
Bob Carrigan
(508) 820-8100

EXCUTIVE ASSISTANT TO THE CEO
Nelva Riley
(508) 820-8105

**VICE PRESIDENT/
GENERAL MANAGER ONLINE**
Martha Connors
(508) 620-7700

**EXECUTIVE VICE PRESIDENT/
STRATEGIC PROGRAMS**
Ronald L. Milton
(508) 820-8661

EXECUTIVE VICE PRESIDENT/COO
Matthew C. Smith
(508) 820-8102

**VICE PRESIDENT/
NATIONAL ASSOCIATE PUBLISHER**
Matthew J. Sweeney
(508) 271-7100

**VICE PRESIDENT/
EDITOR IN CHIEF**
Don Tennant
(508) 620-7714

VICE PRESIDENT/CIRCULATION
Debbie Winders
(508) 820-8193

CIRCULATION
Circulation Coordinator/Diana Turco, (508) 820-8167

PRODUCTION
Vice President Production/Carolyn Mederos; Production Manager/Kim
Pennett; **PRINT DISPLAY ADVERTISING:** (508) 820-8232; Fax:
(508) 879-0446, **DISTRIBUTION:** Director of Distribution and
Postal Affairs/Bob Wescott

MARKETING
Director of Marketing/Matt Duffy, (508) 820-8145

STRATEGIC PROGRAMS AND EVENTS
Vice President Strategic Initiatives/Leo Leger; Vice President Business
Development/John Amato; Director, Event Sponsorship Sales/Ann
Harris; Director, Event Marketing and Conference Programs/Derek
Hulitzky; Group Manager, Event Operations/Michael Meleedy; Market-
ing Manager/Kate Carroll; Marketing Program Coordinator/Chris Leger;
Operations Manager/Lynn Mason; Conference Manager/Nanette Ju-
rgelewicz, Customer Service Specialist/Pam Malingowski; Administra-
tive Coordinator/Shari Redan, One Speen Street, Box 9171, Framing-
ham, MA 01701-9171, (508) 879-0700, Fax: (508) 626-8524

ONLINE ADVERTISING
National Director of Online Sales/Operations, Gregg Pinsky, (508)
271-8013; Online Sales Manager, Senn Weglage, (415) 978-3314, Fax:
(415) 543-8010; Online Sales Assistant, Kathy Snow (508) 270-7112;
One Speen Street, Box 9171, Framingham, MA 01701-9171, Fax: (508)
270-3882

IT CAREERS ADVERTISING SALES OFFICES
Vice President, Recruitment Advertising/Nancy Percival, (800) 762-
2977, Fax (508) 879-0184, Sales & Marketing Associate/Deborah J.
Green, (508) 820-7757, Fax (508) 879-0184, One Speen Street, Fram-
ingham, MA 01701; **EAST:** Regional Manager/Jay Savell, (610) 758-
9755, Fax (610) 419-2134; Account Executive/ Danielle Tetreault ,
(508) 620-7759; **CENTRAL:** Regional Manager/Laura Wilkinson,
(847) 441-8877; Account Executive/Mark Dawson, (508) 620-7760;
WEST: Regional Manager/Caroline Garcia (408) 941-0562; Account
Executive/Mark Dawson, (508) 620-7760

LIST RENTAL
POSTAL: Rich Green, (508) 370-0832, e-mail: rgreen @idglist.com
E-MAIL: Christine Cahill, (508) 370-0808,
e-mail: ccahill@idglist.com **MAILING ADDRESS:** IDG List Services,
P.O. Box 9151, Framingham, MA 01701-9151, Fax: (508) 370-0020

COMPUTERWORLD SALES OFFICES

VICE PRESIDENT/NATIONAL ASSOCIATE PUBLISHER
Matthew J. Sweeney
(508) 271-7100
Fax: (508) 270-3882

SALES BUSINESS MANAGER
Laureen Austermann
(508) 820-8522
Fax: (508) 270-3882

NORTHWESTERN STATES
ACCOUNT DIRECTOR: Jim Barrett (415) 978-3306;
ACCOUNT EXECUTIVE: SaraJane Robinson-Retondo
(415) 978-3304, 501 Second Street, Suite 114, San Fran-
cisco, CA 94107, Fax: (415) 543-8010

BAY AREA
ACCOUNT DIRECTOR: Jim Barrett (415) 978-3306;
ACCOUNT EXECUTIVE: Emmie Hung (415) 978-
3308, SaraJane Robinson-Retondo (415) 978-3304, 501
Second Street, Suite 114, San Francisco, CA 94107, Fax:
(415) 543-8010

SOUTHWESTERN STATES
ACCOUNT DIRECTOR: Bill Hanck (949) 442-4006;
ACCOUNT EXECUTIVE: Jean Dellarobba (949) 442-
4053, 19200 Von Karman Avenue, Suite 360, Irvine, CA
92612, Fax: (949) 476-8724

EASTERN CENTRAL STATES/ INDIANA
ACCOUNT DIRECTOR: Peter Mayer (201) 634-2324;
ACCOUNT EXECUTIVE: John Radzniak (201) 634-
2323, 650 From Road - 2nd Floor, Paramus, NJ 07652,
Fax: (201) 634-9289

CENTRAL STATES
ACCOUNT DIRECTOR: Bill Hanck (949) 442-4006;
ACCOUNT EXECUTIVE: Jean Dellarobba (949) 442-
4053, 19200 Von Karman Avenue, Suite 360, Irvine, CA
92612, Fax: (949) 476-8724

NEW ENGLAND STATES/ MINNESOTA/ WISCONSIN/ OHIO
ACCOUNT DIRECTOR: Laurie Marinone (508) 271-
7108; **ACCOUNT EXECUTIVE:** Deborah Crimmings
(508) 271-7110, One Speen Street, Framingham, MA 01701,
Fax: (508) 270-3882

METRO NEW YORK
ACCOUNT DIRECTOR: Peter Mayer (201) 634-2324;
ACCOUNT EXECUTIVE: John Radzniak (201) 634-
2323, 650 From Road - 2nd Floor, Paramus, NJ 07652,
Fax: (201) 634-9289

SOUTHEASTERN STATES/ ILLINOIS/ MICHIGAN
ACCOUNT DIRECTOR: Lisa Ladle-Wallace (304) 284-
4972, 5242 River Park Villas Dr., St. Augustine, FL 32092,
Fax: (800) 779-8622; **ACCOUNT EXECUTIVE:** Deborah
Crimmings (508) 271-7110, One Speen Street, Framingham,
MA 01701, (508) 879-0700, Fax: (508) 270-3882

INTERNATIONAL DATA GROUP

CHAIRMAN OF THE BOARD
Patrick J. McGovern

CEO
Pat Kenealy

COMPUTERWORLD is a business unit of IDG, the
world's leading technology media, research and event
company. IDG publishes more than 300 magazines
and newspapers and offers online users the largest
network of technology-specific sites around the world
through IDG.net (www.idg.net), which comprises more
than 330 targeted Web sites in 80 countries. IDG is
also a leading producer of 168 computer-related events
worldwide, and IDG's research company,
IDC, provides global market intelligence and advice
through 51 offices in 43 countries. Company informa-
tion is available at www.idg.com.

IDG

ADVERTISER'S INDEX

This index is provided as an additional
service. The publisher does not assume
any liability for errors or omissions.

Have a problem with your Computerworld subscription?

We want to solve it to your complete satisfaction, and we want to do it fast.
Please write to: **Computerworld, P.O. Box 35001, Northbrook, IL 60065-3500.**

Your magazine subscription label is a valuable source of information for you and us. You can help us by
attaching your magazine label here, or copy your name, address, and coded line as it appears on your
label. Send this along with your correspondence.

ADDRESS CHANGES OR OTHER CHANGES TO YOUR SUBSCRIPTION
All address changes, title changes, etc. should be accompanied by your address label, if
possible, or by a copy of the information that appears on the label, including the coded line.

YOUR NEW ADDRESS GOES HERE: **ADDRESS SHOWN:** ❏ Home ❏ Business

NAME
TITLE   COMPANY
ADDRESS
CITY   STATE   ZIP

OTHER QUESTIONS AND PROBLEMS
It is better to write us concerning your problem and include the magazine label. Also, address changes
are handled more efficiently by mail. However, should you need to reach us quickly, the following toll-free
number is available: **(888) 559-7327 Outside U.S. call (847) 559-7322.**
Internet address: cw@omeda.com

NAME   TITLE   COMPANY   ADDRESS   CITY   STATE   ZIP

How to Contact
COMPUTERWORLD

*We invite readers to call or write with their comments
and ideas. It is best to submit ideas to one of the department
editors and the appropriate beat reporter.*

Don Tennant,
editor in chief
(508) 620-7714

Mitch Betts,
executive editor
(301) 262-8243

DEPARTMENT EDITORS

Craig Stedman, News editor ....(508) 820-8120
Tommy Peterson, Technology editor ....(508) 620-7729
Kathleen Melymuka, Management editor ....(508) 820-8118

REPORTERS

Matt Hamblen, networking; network systems management;
e-commerce; CA) ....(508) 820-8567
Thomas Hoffman, information economics; IT
investment and management issues; careers/labor ...(845) 986-9630
Lucas Mearian, financial services; storage;
IT management ....(508) 820-8215
Linda Rosencrance, general assignment;
transportation/carriers ....(508) 628-4734
Carol Sliwa, Microsoft; Web services technologies;
application development; retail industry ....(508) 628-4731
Marc L. Songini, ERP; supply chain; CRM; databases;
data warehousing; EAI ....(508) 820-6182
Patrick Thibodeau, enterprise systems; outsourcing and
immigration issues; corporate antitrust issues ....(202) 333-2448

Dan Verton, federal/state government; legislation;
critical-infrastructure security; travel ....(703) 321-2277
Jaikumar Vijayan, corporate security/privacy issues;
manufacturing ....(630) 978-8390
Todd R. Weiss, general assignment; Linux;
messaging/collaboration ....(717) 394-3850

OPINIONS

Jamie Eckle, Opinions editor ....(508) 820-8202
Frank Hayes, senior news columnist ....(503) 252-0100

FEATURES

Ellen Fanning, special projects editor ....(508) 820-8204
Robert L. Mitchell, senior editor ....(508) 820-8177
Mark Hall, editor at large ....(503) 391-1158
Gary H. Anthes, national correspondent ....(703) 536-9233
Julia King, national correspondent ....(610) 532-7599

COMPUTERWORLD.COM

Tom Monahan, online director ....(508) 820-8218
Sharon Machlis, online editor/online ....(508) 820-8231
Ken Mingis, online news editor ....(508) 820-8545
Marian Prokop, online editor at large ....(508) 620-7717
David Ramel, e-mail newsletter/online editor at large...(508) 820-8269

John R. Brillon, associate art director ....(508) 820-8216
David Waugh, associate art director ....(508) 820-8142

Peter Smith, Web development manager
Kevin Gerich, Mark Savory, Web developers
Matthew Moring, graphics designer

RESEARCH

Mari Keefe, research manager
Gussie Wilson, research associate

COPY DESK

Michele Lee DeFilippo, managing editor/production ...(508) 820-8126
Bob Rawson, assistant managing editor/production ...(508) 271-8015

Mike Parent, Monica Sambataro, senior copy editors
Eugene Demaitre, copy editor

GRAPHIC DESIGN

Stephanie Faucher, design director ....(508) 820-8235

April O'Connor, associate art director
Julie Quinn, senior designer
Susan Cahill, graphics coordinator
John Klossner, cartoonist

ADMINISTRATIVE SUPPORT

Linda Gorgone, office manager ....(508) 820-8176

CONTRIBUTING COLUMNISTS

**Pimm Fox, Michael Gartenberg,
Dan Gillmor, Paul Glen, Barbara Gomolski,
Thornton A. May, David Moschella,
Bart Perkins, Paul A. Strassmann**

CONTRIBUTING WRITERS

**Mary Brandel, Russell Kay,
Sami Lais, Robert L. Scheier,
Steve Ulfelder**

COMPANIES IN THIS ISSUE

Page number refers to page on which story begins. Company names can also be
searched at **www.computerworld.com.**

Servers

"It was not a painful process," Glazier said, noting that "there's a ton of low-hanging fruit" in potential server cost savings. But there were some downsides, he added. The biggest was that many software products lack the ability to use all the application processes on servers simultaneously. Glazier also said tools for monitoring servers that run multiple applications "are still not sophisticated enough . . . and need to grow up."

Kelly Quinn, an IDC analyst who spoke at the event, said that a significant majority of Windows, Unix and Linux servers still support only one application and that their utilization rates can be far below those of traditional mainframes. Quinn and several other users and analysts said it isn't unusual for servers to be running at less than 20% of their processing capacity.

BRIG. GEN. BRAD BUTLER says Air Force users had to be convinced to trade control for greater systems efficiency.

In one case study presented at the conference, Dennis Callahan, CIO at The Guardian Life Insurance Company of America in New York, said that the insurer's server utilization rate has shot up from just 4% in some cases to an average of nearly 50% over the past 18 months.

The improvement was accomplished by stacking as many as four or five applications on each server as new systems came online, Bob Mathers, second vice president of IT operations at Guardian, said in an interview after Callahan's presentation.

Guardian has installed new blade servers from IBM, and it recently signed a $1 million contract to buy 12 of the vendor's eServer p5 570 Unix systems to support further consolidation moves. Thus far, the insurer has reduced the total number of its servers from 1,100 to 900, Mathers said. He estimated that Guardian is saving "millions of dollars a year" in IT costs, although he has yet to perform a formal financial analysis.

Seeking Acceptance

Mathers said it wasn't difficult to manage the cultural shift involved in having several workgroups share a single server. But other attendees warned that user acceptance can be a significant problem because workgroups and other business units often want to keep their own application servers.

Brig. Gen. Brad Butler, deputy CIO of the U.S. Air Force, said that some "social engineering" has taken place there over the past three years to convince users to agree to turn off their servers in the spirit of greater IT efficiency.

Butler said 4,000 systems were eliminated as part of a

JAY GLAZIER said that Lincoln Financial reduced its servers from 300 to 100 and that it "was not a painful process."

consolidation project, resulting in annual maintenance savings of about $100 million. Air Force IT managers now find that despite some initial resistance, users realize "they didn't give up control as much as they gained efficiency," he added.

Greg Jackson, CIO for the state of Ohio, said his IT managers are consolidating 469 e-mail servers that are currently supported by 44 systems administrators. The initiative is aimed partly at saving on the cost of paying the administrators, Jackson said.

He added that the state has begun a program to retrain the e-mail systems administrators and other IT workers who have been displaced from their jobs so they can work in new areas, such as application development.

The University of Pennsylvania in Philadelphia is testing four Linux-based servers for possible use in consolidating systems in its data center, said Raymond Davis, the school's executive director of systems engineering and operations. "The cost savings could be terrific for us," Davis said.

Henry Holcombe, senior vice president and chief technology officer at New York-based hosting services provider Globix Corp., said server consolidation can spawn other problems, such as increases in power and cooling requirements inside data centers.

"Everybody wants to go to blade servers to get more functions in less space, but I've found they require two times as much power" as conventional servers, Holcombe said, adding that blades also can generate more heat than expected. ◗ 49440

MORE ONLINE

In the IT trenches: Conference attendees share their data center war stories:
QuickLink 49439

From our archives: Read about the heat problems caused by some blade servers:
QuickLink 41566
www.computerworld.com

Vendors Push SMASH Protocol for Managing Servers

PHILADELPHIA

Data center managers got their first real taste of an emerging server management protocol at Enterprise Management World. And judging by their initial impressions, Systems Management Architecture for Server Hardware was a smash hit.

SMASH is a proposed command-line protocol that is built on top of the Distributed Management Task Force's Common Information Model and backed by the DMTF and major server vendors. A draft version of the protocol was announced last December and supports a variety of functions, including the use of a common language for technologies and processes related to server management operations.

For example, some server makers refer to the chips inside their hardware as CPUs, while others call them processors. SMASH can be used to develop a set of agreed-upon terms, according to DMTF officials.

It can also be used to set up a common interface for managing servers in branch offices and other remote locations where IT personnel may not be present.

In addition, SMASH enables IT managers to remotely power on or shut down servers that are connected to their corporate networks.

> ❞ **[SMASH] is a great thing for distributed computing.**
> JOHN HUMPHREYS, ENTERPRISE COMPUTING ANALYST, IDC

James Nawa, manager of IT infrastructure at Carpenter Technology Corp. in Reading, Pa., said products based on the protocol would be a welcome addition at his company's 30 global locations. Sometimes the only person available to turn servers on or off in some of the facilities is a secretary or a sales manager. "We have a need for it," Nawa said, referring to SMASH.

Management Functions

Systems administrators will be able to use SMASH to write scripts that provide basic management functions across servers from different vendors, said John Humphreys, an enterprise computing analyst at IDC. "It's a great thing for distributed computing," he said.

Hewlett-Packard Co., Intel Corp. and Dell Inc. all demonstrated working versions of the protocol for conference attendees. Lee Johns, director of software for the global business unit at HP, predicted a "rapid adoption" by vendors.

Winston Bumpus, president of the Portland, Ore.-based DMTF, said vendors are "firmly behind" SMASH. The protocol should become especially useful to IT managers as they implement emerging technologies such as grid and utility computing systems, he added.

Vendors wouldn't comment on when SMASH-based management tools are likely to hit the market. But a DMTF spokeswoman said the protocol is expected to be ratified within a year.

– Matt Hamblen

FRANK HAYES ■ FRANKLY SPEAKING

RFID Adventure

H ERE'S THE STATE OF THE ART for RFID tagging: "At a case-by-case basis, as I go down through our process, I validate that case. A tag is on it. I encode the tag and then I immediately validate that, and I capture those statistics. If it doesn't read, I can pull that out and put another tag on until we get it read."

That's what Ray Hagedorn, an IT executive at Sara Lee Foods, told *Computerworld* reporter Carol Sliwa recently [QuickLink 49245]. And it's not just that the tags are unreliable, Hagedorn says. The middleware is half-baked, the consultants aren't much help, and a real return on investment is nowhere in sight.

See? It's not just you. *Everybody's* RFID project is like that.

The technology really *doesn't* work the way it should. You really *can't* point an RFID reader at a pallet and be sure of getting a response from the tags on each carton. All those dreams of RFID visionaries may come true someday, but not in time for your project. RFID just doesn't work yet. This stuff really isn't ready.

So if you're facing an RFID mandate from Wal-Mart or the Defense Department or some other big customer, that means you have to make a choice.

You can look at your RFID project either as a death march — or as an adventure.

This is no ordinary IT project. One in five RFID tags dies. The signals are blocked by metal in products, by shiny packaging, even by thick liquids. If you expect RFID to work as advertised, your project will be a long, horrible waking nightmare. And it will fail. And everyone connected with it will want to kill you for putting them through it.

But you've still got to meet that mandate. What can you do? You can forget about this as a conventional IT project and treat it like what it is: an expedition into the unknown.

So don't pick a team of perfectionists. Pick spit-and-bailing-wire tinkerers and shade-tree mechanics. Warn them in advance that the hardware is unreliable and that the problems are intermittent. The ones for whom failure isn't an option will run away screaming.

The ones who are left will see it as a challenge. Failure will be their daily companion — right up until it turns into success.

You know these people. For them, this won't be an endless nightmare. It'll be a challenge.

The tags don't work reliably? These people will test 'em as they go and keep testing until they can sniff out the bad ones early. They'll add checksums and redundant data to the tags' contents and put the smarts to verify and do error correction into the software. It may not be a pretty solution, but they'll get it working.

The signals can't make it all the way through a palletload of cartons? They'll work around it, maybe by scanning each carton as it's added to the pallet, then linking all that RFID information in the database. That way, once that pallet is wrapped and strapped, if they can successfully scan even one tag, they can identify everything on the skid.

The middleware isn't up to the job? The database is wrong for the task? Here's where you'll probably have to rein in their urge to kludge. Eventually RFID technology *will* work, and when that happens, you'll need a database that scales up and middleware that hasn't been hacked to a fare-thee-well.

But for everything else, give your RFID people plenty of room to experiment. Their brainstorming ideas may sound off-the-wall. But let them try. If they discover some oddball trick that works, you've got a competitive advantage. If they don't, well, you already know that a conventional approach to RFID is doomed to grim failure.

You don't need another death march, not now. Don't let your RFID project turn into one.

Make it an adventure. ◐ **49441**

FRANK HAYES, *Computerworld*'s senior news columnist, has covered IT for more than 20 years. Contact him at frank_hayes@computerworld.com.

Please join Samsung, Sears and Boomer to help the children.

Middleware is Everywhere. Can you see it?

WebSphere | Key

1. Guest checked in wirelessly.
2. Staff queries guest preferences.
3. Vendor services integrate seamlessly.
4. Supplies are procured automatically.
5. Repeat customers increase profits.

MIDDLEWARE IS IBM SOFTWARE. Powerful WebSphere software. It's the strong, seamless bond that can unite your business, vendors, partners and customers. A dynamic link designed to make your entire organization more efficient. More responsive. More flexible. On demand. WebSphere connects processes, with open standards. And it's easy to manage, too. So all involved get a better night's sleep.

Middleware for the on demand world. Learn more at **ibm.com**/middleware/process **ON** DEMAND BUSINESS